

SOUTHERN TEXTILE BULLETIN

VOL. V

CHARLOTTE, N. C., JUNE 5, 1913

NUMBER 14

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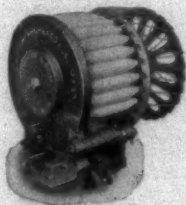
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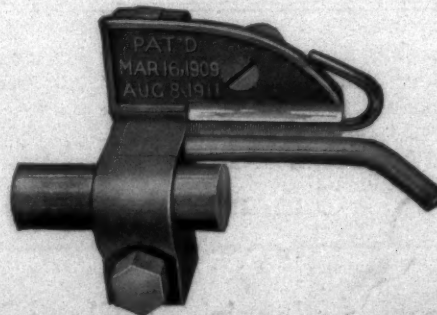


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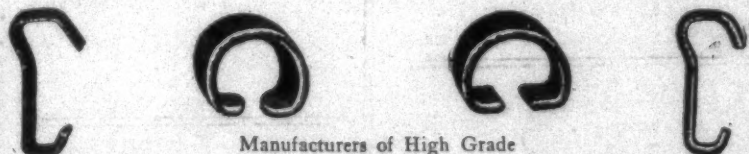
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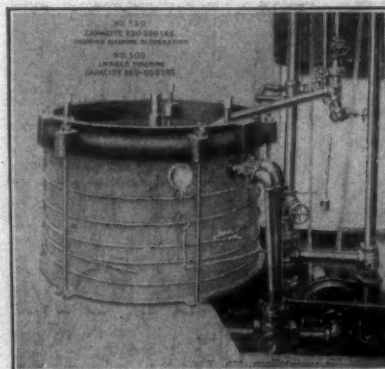
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VOL. 5

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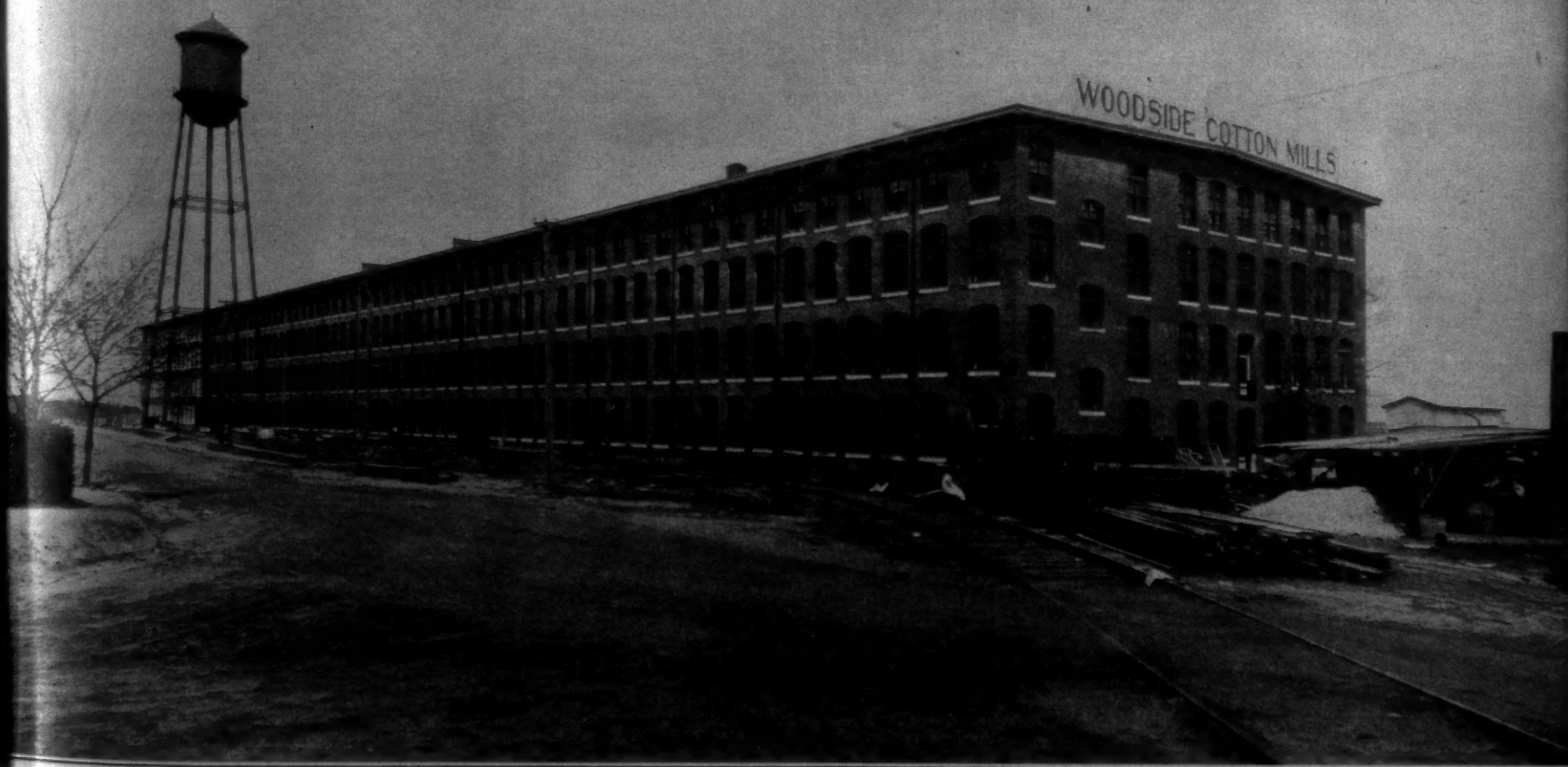
NUMBER 14

Humidity Effects and Textile Testing

Walter S. Lewis before National Association of Cotton Manufacturers

THE demand and necessity for uniform and accurate standards for testing became very acute a few years ago and at that time the National Bureau of Standards became interested in the testing of textile materials. The study of the physical and chemical properties of textile material by means of laboratory tests has been carried on in this country in a more or less desultory fashion. The fact that this work is rapidly increasing is good evidence of the value of the information received. The bureau will gladly co-operate with institutions, investigators, consumers and manufacturers, not only in the execution of scientific testing and standardization, but also in furnishing information in its possession concerning methods of testing and the interpretation of results. It will be pleased, also, to help in the design and construction of special apparatus. The scope of testing in which the bureau is now prepared to undertake is summarized below:

1. Determination upon raw and unspun fibers.
 - a. Identity of Fiber.
 - b. Approximate length.
 - c. Moisture content and "regain."



WOODSIDE COTTON MILLS, Greenville, S. C.

Courtesy Greenville Daily News

Since that time the bureau has aimed to meet this need by the selection of standard materials, standard methods of testing, and development of standard specifications. The bureau also makes available to the manufacturer its facilities, by standardizing the instruments by which he tests his product and upon his request the product itself may be tested. Technical problems are also referred to the bureau, which aims to serve as a clearing house for technical in-

for a great many years. Quite recently, however, the development of more systematic and greatly improved methods of testing, with a consequent augmented accumulation of data, has given the results obtained a much more practical significance than in former years.

Equipment of Government.

The present general interest in the necessity for better methods and standardization of tests has resulted in the establishment of testing apparatus in textile institutions, in-

creasing is good evidence of the value of the information received. The bureau will gladly co-operate with institutions, investigators, consumers and manufacturers, not only in the execution of scientific testing and standardization, but also in furnishing information in its possession concerning methods of testing and the interpretation of results. It will be pleased, also, to help in the design and construction of special apparatus. The scope of testing in which the bureau is now pre-

- d. Quantity of oil, grease, and foreign substances contained.
- e. Percentage loss in securing raw wool.
2. Determination upon yarn, thread and twine:
 - a. Length.
 - b. Tensile strength and elasticity.
 - c. Count or number.
 - d. Twist.
 - e. Percentage of loading, sizing and coloring material.
 - f. Percentage fibre composition.

(Continued on Page 5)

Theory of Card Filleting

In this article is proposed to explain the character of the carding surfaces, and the alterations in working conditions brought about by very slight alterations in the angle, material, condition of teeth, etc. The foundation of the wires is of much greater importance than is generally supposed, and to a certain extent the properties of the carding points and of the foundation are interdependent.

The foundation is certainly intended to keep the carding points in position, but that is only true to a certain extent; if that were its only function, then we should have very poor carding conditions, because the wires have to be so elastic on the fibre that good carding would be difficult. As a matter of fact, the foundation must be firm enough to ensure the wires returning always to their proper carding angle. The next point is the question of the strain on each individual wire, and this strain is dependent upon the number of fibres which are under treatment between the carding surfaces, and upon the state of entanglement. It will be easily understood that there is more strain on the individual wires when carding heavily (with great card productions) and when dealing with very dirty and entangled material. It is very desirable to retain the carding angle as much as possible for the average strain on the wire, so as to ensure good carding, so that the foundation has to be at least strong enough for that; but it is clear that the wire should give way as soon as an overloading occurs, and the excessively large fibre tuft must be able to slip over the teeth, and at the same time it must be able to attach itself to some other teeth in such a way that the mass is distributed over a greater number of teeth, thus straining the individual tooth much less.

To allow the fabric to slip over the wires requires a certain elasticity of the wire, but the elasticity should come into play only under such excessive strain. The wires should therefore be strong enough to resist the bending tendency of normal fibre masses. If the foundation of the wires were rigid, and the constant sudden stresses when each new fibrous mass comes into contact with the wire point would soon break the wire at the foot. This could, of course, be prevented by making the wire sufficiently elastic; but then the carding power of the wire would be practically lost. We get these conditions much better, and at the same time retain almost ideal carding conditions, by making the foundation elastic. This elastic foundation must permit the wire to bend slightly under the sudden strain; but this bending is bodily for the wire, whilst the elasticity of the wire is brought into play almost imperceptibly, and the chief work is done by the foundation. This gives way fairly easily at first,

but it offers more and more resistance through the growing compression of its own material the more the wire is bent backwards. It is now clear that the foundation should be firm enough to relieve the momentary sudden strain on the wire, and at the same time possess sufficient elasticity to retain the carding angle as much as possible. The maximum compression of the clothing must be reached when the wires are loaded to the maximum desirable extent. The strength of the wires has to be calculated so that at this point it begins to assert its elasticity, and any overloading of the wires must be prevented by allowing the wire itself to bend to such a degree that the fibres are permitted to slip over it. This is an extreme case; but all these factors affect the life of the card clothing.

The card clothing serves to straighten out and separate the fibres by holding them preliminary to and for carding, and also to take out the impurities. Further conditions which the card clothing has to fulfill are easy doffing of the fibres out of the wire surface, and easy cleaning or stripping. All these factors require contradictory conditions, so that a certain compromise has to be arrived at in the case of all qualities of card clothing.

For carding we require opposed surfaces of holding organs made in such a way that the material is made to suffer as little as possible. The angle of the wire is of the greatest importance in this connection. Carding takes place by a tuft of cotton fibres being held at one end by means of a band or loop in the fibres, by means of impurities, neps, or by the natural convolutions and friction. Another opposed carding surface takes hold of the same tuft of fibres, combs, the ends out, and lays them parallel, at least momentarily, the carding action being greatly aided by the entanglements themselves through the fibres being drawn through them under a certain strain, and friction. It will be easily seen that this action is of great aid in the revolving flat card where a smooth product is desired. It is only a minor point, but it goes to show how all the conditions in the revolving flat card help to produce a smoother material than the roller and clearer card. In the latter machine the fibre tuft is not held long enough in a stretched state between two contending card surfaces to allow such an action to assert itself.

With regard to the carding conditions, we have not only to consider the carding power of the filleting, but also the retaining power of the filleting for the carding process, this being essentially different from the retaining power required for the retention of the impurities, as filleting. The condition of the point is of great importance in this respect

and the quality of the point and of its serrations fixes to a great extent the quality of the work. In this respect Dobson's study on carding gives very interesting information. The actual pressing of the fibres into the flats by the cylinder makes it possible for the flat wires to retain the fibres well and to keep the short fibres back. This is also often increased artificially by the shape and surface conditions of the wire, etc.

As a fundamental rule it may be laid down that carding without damage to the fibre is an utter impossibility. It is clear that any process which subjects the tender cotton fibre to such strain must necessarily damage it to some extent, especially by breaking the weakest fibres (which, by the way, is not such a great loss as might be supposed, as these weaker fibres would only remain in the product to the detriment of the yarn strength; but, being broken, they can easily be taken out by the carding organs themselves, thus rather strengthening the yarn instead of weakening it.) Of course, it is essential that such care be bestowed on the carding process that as little damage is reduced to the minimum, as there is a very early limit to the "beneficial" damage. A rule cannot be laid down which will do for all conditions, as in the lower grades of worst yarns it is desirable to retain as much as possible of the fibre, whilst for fine yarns of any description it is desirable to have all the component fibres of the thread as strong as possible. Indeed, the good results obtained by double carding for certain purposes was to a great extent based on the excessive strain on the weaker fibres and the natural consequences as indicated above. As a rule is a question of getting the best carding in the very first line, and the remainder is only of relative importance, as some damage is always done. In this connection some very interesting experiments have been made. It was found that a certain modern card gave excellent results, and a yarn which for all practical purposes might be described as absolutely clean and even. Other cards in the same mill, working side by side with cards of the previously mentioned make, did not give the same cleanliness, but it was found that they made somewhat stronger yarn. Experiments were made, but nothing could be found beyond certain differences in the card clothing which would tend to a rather rough treatment of the fibre in the cards giving the cleaner yarn. The cause for probable cause was found only after a long time, when combining was resorted to.

It may here be mentioned that the strangest characteristic of the card giving the cleanest yarn was that it gave the least waste—in no case as much waste as any of the other cards. As soon as combing was resorted to, certain irregularities made

themselves felt, and it was found that the clean product gave an excessive amount of waste on the combers as against the product of other cards with the same setting. The only explanation seems to be that the card giving such a good carded yarn (good in appearance), ceased to be of value when combing was introduced, because it must have broken the fibres. It is clear that or combing it is better to retain some impurities in the cotton rather than spoil the staple provided, of course, that the impurities left in the product are such as can be taken out in the comb without materially increasing the comb waste to be taken out on that account. No doubt need be entertained about the fact being as stated, because these experiments were conducted with the greatest care, and they were often repeated, because the matter was of such great importance. It is, of course, impossible to state the makers' names, but it would be interesting if this matter were taken up by someone who has the machines and the leisure to go into the subject thoroughly, with a view to a possible reduction in the cost of combing! There seems to be splendid opportunities in this connection, and the writer is of the opinion that a careful study of this matter would lead to a saving of 1 or 2 per cent of comb waste, whilst retaining the same standard of quality for the combed sliver and for the yarn. The experiments are certainly expensive; but the possible gain appears to be well worth the amount of money and trouble which would be incurred.

In all cases the card clothing must be such as to permit the process of stripping to be done effectively without detrimental influence on the clothing. Another important point affecting the life of the clothing is the angle of the wire, which should be fixed so that good carding conditions are retained as long as possible. If one kind of card clothing will still give good results after having been ground down 1-32 in. deeper than another, then the former is so much more valuable. This is, of course, provided that the original heights of the clothing were the same. As a rule, a high clothing will take out too much waste if taken beyond a certain point, because the knee of the wires is so deep that many good fibres will slip into the filleting deep enough to go into the waste, instead of the carded product. This shows, also, that there must be a certain falling off in the quality of the carding after the card has run for a few years. This difference is, however, very small, provided that the wire is not so short as to jeopardize the carding conditions. The reason for this is that even with new filleting of proper height the "falling" will prevent longer fibres from going in to the waste after the card has run

a certain time after stripping. The only disadvantage is that the "filling" itself will be rather shorter. Theoretically, the filleting will require stripping oftener after a few years' work, because there is less room for short fibres, and the card cannot run so long with the certainty that the short fibres are properly taken out.

Coming now to the filleting itself, we may distinguish two principal parts—i. e., wire of certain characteristics, and the foundation to maintain the necessary working conditions of the wire.

As regards the wire, the most important point is the carding angle, which is limited each way by the setting necessary for carding and retaining the impurities respectively. or carding we have to consider the angle of the wire when at rest, because the fibre is initially acted upon by this angle, and not by the somewhat more obtuse angle formed when the wire is under more or less strain. Besides the angle, we have also the section of the wire, which is important for carding; further, the kind of material which is suitable for a point of the best quality (steel and iron wire are very different in this respect, as may be gathered from the detailed explanations in Dobson's book); and also the condition and sharpness of the teeth, and the condition of the wire sides.

For retaining the impurities we have also several points which are important besides the angle—i. e. the suitable free length of wire for holding the impurities. For some textile materials this free length of wire differs considerably, and even in the cotton trade there are slight differences in the different makes of card clothing. The working conditions alter according to the length of the wire, so that it is clear that the wire when it has been ground down to a certain extent, and that after this period the working conditions begin to deteriorate. However, even the deterioration is only a matter of degree, as a spinner who specializes on fine counts might consider the clothing on certain cards to be too far worn for fine work, whilst they would still be capable of producing a card sliver quite good enough for ordinary purposes where high quality is not as essential. Now, as there is a limit below a certain point, so there is a limit as regards length of the wire above a certain point, which must be kept. In this case, again, the finer qualities may not be successfully worked with a card clothing which is quite good enough for less particular work. Thus it comes about that the card clothing makers have various lengths of wire, varying chiefly according to the districts for which they cater. However, the longest new clothing does not necessarily work under the comparatively worst conditions, because the particulars—as carding angle, height of knee, foundation, quality and counts of wire, etc.—may all be modified to give a clothing which may do even better work than a shorter one; but if the shorter clothing is well made, then it is very likely that the longer clothing cannot be ground

down as far as the other, and that, meanwhile it causes more good fibre to go into the waste.—Textile Manufacturer of Manchester, Eng (To be continued.)

Humidity Effects and Textile Testing.

(Continued from Page 3)

3. Determinations upon fabrics:

- a. Weight.
- b. Tensile strength and elongation.
- c. Percentage fiber composition.
- d. Thread count.
- e. Yarn number or size.
- f. Folding endurance.
- g. Action of light on colors.

The humidity of the atmosphere affects textiles in general, and illustrations of its influence should be given.

The determination of moisture in fibers is known as "conditioning," but this word has been enlarged upon and now most of the commercial textile testing establishments are known as conditioning houses. The tests by such establishments comprise every conceivable analysis, such as moisture, identification of fiber, number of yarn, sizing and loading, weight, tensile strength, etc. England and Europe have 37 or more textile testing houses, Japan has a large one, and the United States has one in New York City. To give an idea of the extent of this testing, the figures below show the quantities of material which passed through the three largest conditioning houses in the year 1912:

Tourecoing, France . . . 125,200,000 lbs.
Roubaix, France . . . 124,800,000 lbs.
Bradford, England . . . 109,950,000 lbs.

The above figures speak for themselves as to the worth and usefulness of textile testing, and the domestic manufacturers are now becoming convinced that this country should have them. The Bureau of Standards is continually answering inquiries along this line and it has, for the last five years, been developing methods for such testing.

In the cotton industry little or no standardization as to methods of testing has been undertaken, and although tests are performed the industry is dependent very largely upon the units and methods as carried out by certain manufacturers and individuals.

The demand for information from the government departments and those engaged in the manufacture, distribution and use of textiles in regard to better methods and standardization of tests has resulted in the establishment recently of testing apparatus in textile institutions, public testing laboratories, stores and mills. Since the dealers and manufacturers of cotton yarn were in great need of more definite knowledge and generously supplied the necessary material, an investigation upon the physical and chemical properties of cotton yarn was undertaken.

Only a limited number of yarns have thus been investigated, but it is believed that the results already attained will furnish information of value to manufacturers and consumers. The object of the work was to show the desirability of improving the technical regulation of the trade and the necessity of

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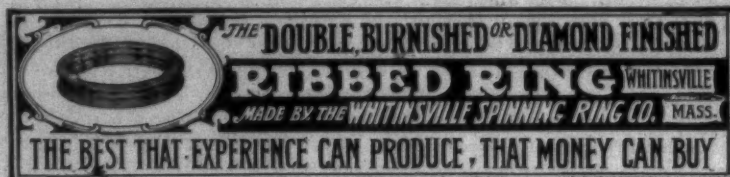


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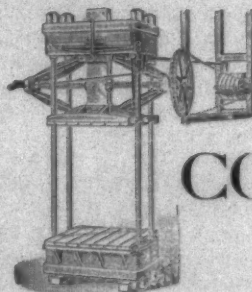
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better specifications, and that if a thorough study of this subject is published some of the misunderstandings now existing may be avoided, at the same time uniformity may be promoted in yarn deliveries and methods of testing.

The samples of yarns employed in this investigation were secured from members of the National Association of Cotton Manufacturers, through the courtesy of Arthur T. Bradlee, chairman of Committee on Conditioning of Cotton Yarns and Cloths. The yarn sizes used were of singles, 25 to 100 inclusive; and of two-ply, the range was from 14 to 1000, inclusive.

Results of Testing Yarns.

Some of the results obtained upon cotton yarns under different atmospheric conditions are as follows:

1. With small changes in the relative humidity of the atmosphere such as, from 45 per cent to 85 per cent, the size of a 36/1 yarn may vary as much as two counts, and an 8/1 yarn less than half a count, or

in other words, 5.5 per cent in each case. The two-ply yarns are not as susceptible to changes due to humidity in the atmosphere, although they vary from one-half a count on 10/2 yarn to almost five counts on 96/2 yarn with an average of 4.5 per cent on all sizes.

2. Under the conditions outlined in No. 1, the yardage in one-ply yarns singles can be increased or decreased from 1,700 to 3,700 yards per pound, or 5.5 per cent, according to the size of the yarn. The two-ply yarns can be changed in yardage by the humidity of the atmosphere, the difference in length ranging between 250 to 2,000 yards per pound, or about 4.5 per cent.

3. The tensile strength of cotton yarns increases with an increase of moisture up to 85 per cent relative humidity (the highest point reached in this investigation.) The one-ply yarns singles are influenced more than two-ply yarns. Calculating from 55 per cent. to 85 per cent. relative humidities, the singles in-

(Continued on Page 8.)

Origin and Nature of Color

It is still less than two hundred and fifty years since Sir Isaac Newton taught us to analyze sunlight by means of a glass prism; and incidentally indicated the source of colors through revelations of the solar spectrum. Whether the ancient scientists of Egypt and Babylonia had earlier knowledge on this fascinating subject has not come down to our time with any certainty. Certain it is that they understood much better than we how to produce paintings of true permanency. It had been supposed that a beam of sunlight consists of but a single color. Instead, however, it was discovered by Newton that there were present colors innumerable. His experiments with the prism demonstrated the presence of seven distinct belts of color into which sunlight was separable, namely, violet, blue, indigo, green, yellow, orange and red; and the gradations of shading in each of these are fascinatingly endless. Light is projected from the sun in waves of inconceivable velocity; the speed being estimated at some 186,000 miles every second, figures, to be sure, which actually convey no adequate sense of speed to little mental men like ourselves. Now the peculiarly cushioned impact of these light waves with visible things yields every color known to us. How marvelous must be the delicately powerful structure of the human eye to receive and recognize the ordinary every day little considered light of the sun! Why a fully corrected double anastigmat isn't in it. Do we not walk about without commensurate awe all our days among superhuman mysteries?

With respect to the eye's apprehension of color let it be remarked that whatever color any individual body appears visually to possess is not really inherent within that body itself; but it rather the result of light falling upon it. This is fundamental, and axiomatic. For example, when the character of an object is such that all the days of light playing over it are absorbed—soaked up as by a sponge—the color effect of black is produced; and so we name it. On the contrary should such a body possess the power of reflecting—or casting off—all the light rays falling upon it, a white appearance is the consequence; and we remark that this body is of a white color. Note that in the first named illustration no light rays are thrown off, and in the second none are absorbed; whilst in both instances the total of light is specified. The common nomenclature we constantly apply to them is scarcely accurate from the scientific standpoint, but is universally understood. So with other examples. If a portion only of light rays coming in contact with any object is absorbed by it; and at the same time another proportion is repelled we have the effect of a grey or slate of differing depths and tones according to the percentage in which the various constituents of sun-

light are received into its structure or rejected. Thus a fabric is said to be of a red color because it has the property of absorbing all the spectrum rays with the sole exception of the reds. The red elements of light, tinted on either hand, it may be, by adjoining zones of orange or violets, constitute what innocently we believe to be the fabric's color. The red rays only are in evidence upon the surface of the cloth, the remaining six groups of rays having penetrated out of sight.

This is one of the reasons why most dyed materials present another appearance in artificial lights. Quite a grotesque illustration, and one which clearly proves the foregoing statements may readily be exploited thus: Place a little methylated spirit in a glass, and add some common salt—chloride of sodium. Mix the two together and saturate a small wick with the solution, and set it on fire. Notice the queer fellow flame given off. Take the light into a darkened room, and examine our aforementioned red fabric in its presence. Where is the red gone to anyhow? It is red no longer, but a dirty looking black. And why? Because of the absence of red rays in this yellow sodium light we introduced into the chamber from which normal sunshine was excluded. The cloth absorbs all the light falling upon it, nothing remains to glance off. Black is the result of total absorption. (What a vista of spiritual law in the realm of the natural that opens up). In the same sodium light the human face and form present the ghastly semblance of a dead body, and all as a consequence of the unusual nature of the illuminant. Color exists only in light, we therefore repeat, and to this must be added that colors are inevitably modified or altered according to the kind of light in which they are viewed.

Certain artificial illuminations lack the well-known proportions of blue and violet, and have an excess of rays from the other end of the spectrum, yellow, orange and red. Exaggerations accordingly are produced, and violets, blues and greens suffer most from the defects as might be expected. Herein lies one of the chief difficulties when seeking to closely match shades after the gas is lighted or the electric light turned on of a winter evening—in Toronto, anyway! The attention of inventors has long been directed to this perplexing problem. The ordinary electric arc light is superior to the small lamps, but troubles one with violet rays. Some of the incandescent gas lights (known among us familiarly as gas mantles), yield excellent results when in good trim. Of course they are fragile. Magnesium wire is frequently used, though it is considerably short of perfection in more ways than one. This is what the city photographers generally work with after dark when he advertises to make pictures night and day. One or two of the latest makes of elec-

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SYNTHETIC INDIGO

INDIGO PASTE

tric lamps of high candle power seem at the present writing to serve as the best attainable substitutes for daylight. Even of the latter there are more sorts than one, and from long observation it has been found that for every purpose unobstructed light from a northern exposure gives by far the most satisfactory illumination to the colorist.

When the eye first grasps the situation is the most favorable moment usually to decide about shades under investigation or comparison. The retina becomes wearied and dazzled by prolonged scrutiny, and the branch of brain fog is obtained by placing some complementary color nearby upon which the eye may be permitted occasionally to wander and thus to relieve the

strain and quietly compose the optic nerves. Supposing one is matching a cardinal or crimson let him have by him some green object upon which to divert his gaze for a moment, and it will be found that the eyes have become rapidly rested, and capable of again conveying to the brain their normal color sensations. Green is a color always kindly to the eyes anyhow (excepting in Ireland once in a while,) and it is for that reason, doubtless, that so much of it has been beneficially strewn all about us in grasses, plants and trees.

Not only do lights differ, and the dyer's eyes require fair treatment, not only does the general character of matter determine in some degree its color in contact with light, but also the conformation of its surface plays an important part in its resultant tone and brilliancy. Dyers daily experience this in the pursuit of their avocation. They know that other things being equal they cannot get the same bright hues upon fine flat surfaced wools, or yarns, and cloths, that they obtain on coarser stuffs. Differences of surface explain this fact. These are not similarly exposed to the light. In the case of the soft fine grades of stock it is as though the waves of light struck the fibres in such fashion as a stone comes down upon soft garden soil. This is penetration rather than the scintillations of reflected beams. In the example of the coarser dyed materials it is as though the light were flung against its mass of harder, and broken contour with distinct reflection as when a pebble is cast against a board fence, and falls back upon the thrower.


So much then for color in the abstract. That's all so far fairly simple. Granting the truth of what has been stated, how is it that we buy in kegs and cans what purport to be colors? Manufactured for the express purpose of coloring materials in the dyer's rooms? How comes it that by means of these we dye all sorts of shades on all kinds of goods? Is there then no color in the aniline can nor any color deposited upon or within the textile fibres? An apt question or two, my son, and deserving explanation surely. If you will carefully go over the statements already proffered you will understand our perfectly excusable current looseness of speech concerning various imperfectly understood properties and processes. It belongs to the accommodations of popular languages universally. A well known parallel is our heedless reference to the sun's rising and setting day by day. In these privileged days of widespread knowledge we don't actually believe that the sun either rises or sets. So, to be correct we might as well confess that there is no such thing as color—according to the popular conception of color—in the aniline can. And that no color is deposited in dyeing operations. But contained within the aniline can is a wonderfully organized chemical product which has the power of so affecting the constitution of animal and vegetable fibres as to cause them to appear possessed of color

in the presence of light. There's an affinity easily enough traced between these "coal tar deviates," and light anyway. Coal is often said to be "imprisoned light," and aniline some of coal. Dyes produce color only in the presence of light, for it is the light which contains the color and not the aniline eg. The alteration effected in the dye-bath is not in fact a process of coloring so much as a preparation of materials to manifest a given shade when they may afterwards viewed in the light.—Canadian Textile Journal.

An Old Method of Dyeing Basic Violets.

A time-honored practice in the dyeing of basic violets on cotton mordanted with tannin and tartar emetic, consists in adding a small proportion of vitriol to the dyeing liquor containing the coloring matter and alum. In treating hanks by the tub or bark method many an old dyer has asserted that without the assistance of the sulphuric acid level dyeings could not be expected nor could the same degree of brightness be attained. Ganswindt, in the "Farber Zeitung," attacks the custom and sets out to show that the habit of adding sulphuric acid to the dyeing liquor is not only of no benefit but in reality harmful, in that it causes a loss of coloring matter. The argument is labored but not at all satisfactorily supported, and we venture to express the opinion that he has overlooked a few important technical features connected with the matter. First of all the claims made by the old dyers as to the effectiveness of the slight addition of vitriol are well borne out in practice: it gives brighter and more level dyeings on yarns when full-bodied shades are being produced. There is really no need to look far for explanation of its beneficial influence, for it rests simply on the action of the stronger acid in materially assisting the weaker in its functions in the operation.

Alum, and in some instances likewise acetic acid, is added to the solution of basic dyestuffs when applying these to mordanted material with the object of increasing solubility of the dyestuff, and, in so doing, simultaneously prevented its too rapid absorption by the mordanted cotton. Methyl violet, the main representative of basic violets evinces in many circumstances a somewhat greater avidity for mordanted cotton than perhaps all other basic dyestuffs. In practice this feature tends towards the production of uneven dyeings in dark shades, and the tendency is corrected, or delayed, by increasing the amount of acid present in the dyeing liquor. In the case of dark shades it is not usually advisable to pass a certain limit in the amount of alum to be used in a given volume of water, otherwise an unpleasant but pronounced harshness is imparted to the cotton. And so the old dyers meet the circumstances by relying upon the supplementary use of vitriol to increase




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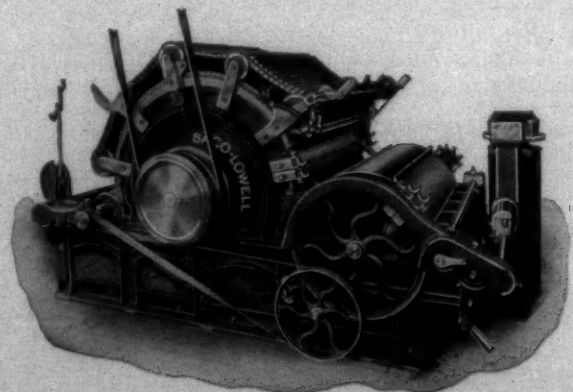
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CHARLOTTE, N. C.

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the acidity of the bath. In some instances it may just be possible that the sulphuric acid used in this fashion has another likely function, in more effectively removing from the fibre any excess of mordant. Taking either point of view there is no coloring matter destroyed, and we think that the time-honored custom will still find favor.—Textile Recorder.

The Carding Process

Contributed Exclusively to Southern Textile Bulletin by W. P. Hurt

Carding is a process by which the fiber is combed from its crude state to a more uniform condition. This being the case, the better the carding, the easier to produce a nice smooth thread from the sliver. We obtain good carding by accurately grinding the clothing and properly adjusting the setting parts. We will consider only the revolving flat card as they are in general use in practically all of the mills in this country.

The frame holding the cylinder and doffer should be kept level. Every time the card is ground, the grinder should lay his level on the frame and if it is not level, by all means, level it before grinding. If the card is ground while out of level, one corner of the frame will be lower than the other and this will throw the grinding bearing out of line and the roller will not travel parallel to the grinding surface of the cylinder and doffer, but will travel slightly across and grind them hollow making it impossible to set accurately to a gauge. The clothing should be kept tight on the cylinders, otherwise the wire will "fly up" and gradually ruin the surface. When wire begins to "fly up" the clothing is too loose to do good work and the only remedy is to redraw the clothing, first rubbing the wire back to its position as it passes through the machine. When a slight pressure of the hand will work the clothing back and forth, it should be redrawn. There is nothing to be gained by running cards with loose clothing. The question is often asked, "How shall I set my cards to get best results?" We venture the answer that many little things may cause one to use a different gauge for the setting of the same part in the same or other rooms. Solid foundations, unsteady floors, difference in tension when drawing on the clothing, grades and length of staple being used, etc.

Settings.

Doffer to cylinder 7-100 tight.
Doffer comb to doffer 18-1000 or more.

Set the comb as far away from the doffer as possible to work well. When the comb is set too close it combs thousands of little neps into

the sliver that would otherwise remain in the wire and come out in regular stripping. Set flats to cylinder, front stand 9-1000 gradually opening at each stand to setting the back at 12-1000.

Lickerin to cylinder 7-1000.

Feed plate to lickerin 9-1000 with inch fiber, 12-1000 with 1-8, increase the distance at this point if the staple is longer.

Many grinders persist in setting to 7-1000 at this point, but where this is practiced the yarn will not break as strong as with the wider setting.

Set mote knives as follows.

Top 12-1000 to lickerin.

Bottom 10-1000 to lickerin.

Set the screens under lickerin to 10-1000.

Screens under cylinder 34-1000 tight nearest doffer and loose on back. See that the screens join together under the cylinder. If any opening is left, the sliver will contain long flakes caused by the cotton accumulating in the crevice and catching on to the wire when the opening becomes full.

Comb to flats 10-1000.

Stripper plate to cylinder 18-1000 or more, if a greater quantity of strips is desired.

Draft and Constant.

Multiply all the driven gears together for a dividend, and all the driving gears together for a divisor. Suppose we have a card with the following gears and wish to find the constant. We will begin at coiler with driven gears and diameter of calendar rolls.

Coiler calendar roll, 2 in. diameter.

Coiler driving gear, 24 T.

Large doffer gear, 180 T.

Side shaft bevel gear 22 T.

Gear on lap roll, 48 T.

Having found the driven gears and diameter of the roll, we will proceed with the drivers.

Top roll, 6 in. diameter.

Coiler change gear, 16 T.

Calendar change gear, 19 T.

Doffer bevel gear 22 T.

Feed roll spur gear, 17 T.

$2 \times 24 \times 180 \times 22 \times 120 \times 48$

$= 1604.95$ Const.

$6 \times 16 \times 19 \times 22 \times 17$

Having worked out the constant we obtain the draft by dividing the

draft by the draft gear and vice versa.

1604.95

$\div 16$ Draft gear.

100

1604.95

$\div 100$ Draft.

16

A good short rule to find the production of a card is to multiply hours run by 21 and this product by the revolutions of the doffer per minute and by weight of sliver in grains. The product will be the production in pounds. This applies to a 27-in. doffer. Suppose we are running ten hours per day, revolutions 12 turns per minute, and weight of sliver 60 grains per yard.

$10 \times 21 \quad 210 \times 12 \quad 1520 \times 60 = 151,200$
pounds per day of 10 hours.

The speed of cylinder should not exceed 165 revolutions per minute for when run faster they are liable to heat the clothing and shorten the life of it.

Oiling should be done with care. The fast running bearings oiled at least once a day; lickerin, cylinder and doffer bearings filled with grease for doffer bearings may burn out while grinding. Clean fronts at least four times a day and clean all other parts after each stripping. Grinders should be required to take off lickerin covers and clean out cotton and dirt from ends at each grinding. They should be required to clean up each card before setting up.

Have a time to do everything and see to it that it is done on time. Floors should be swept at least six times a day, once after and once between each stripping gives good results.

Humidity Effects.

(Continued from Page 5)

crease 17 per cent and the two-ply yarns increase 11 per cent in tensile strength. Further tests were made with the two-ply yarns and the results show that the strength can be increased more than 16 per cent between a relative atmospheric humidity of 85 per cent and a relative atmospheric humidity of 45 per cent.

The count, yardage, strength and elongation of cotton yarns is direct-

ly influenced by the amount of moisture present in them. In view of this fact it is not only advisable but necessary that some standard conditions of humidity and temperature should be adopted and recognized in the testing of fibres, twines, yarns and fabrics.

In this country there is no recognized standard atmospheric condition under which tests should be made. From recent experiments and work upon the subject, a suitable atmosphere and probably very near the normal condition is one of 65 per cent relative humidity at a temperature of 70 degrees Fahrenheit.

The term relative humidity means the percentage ratio of moisture present in the air at a certain temperature, as compared with the amount of moisture that the air would contain at saturation if at the same temperature. The 65 per cent relative humidity above mentioned therefore, indicates a constant amount of moisture in the air, provided the temperature is kept constant, but the amount of moisture for 65 per cent relative humidity increases with increase of temperature.

Balance of Trade is in Favor of United States.

Manufactured goods exported from the United States during the first ten months of the fiscal year 1913 exceeded by \$500,000 worth a day the exports in the corresponding period last year. The exports in the first ten months this year have been greater by \$154,000,000 than last year, the totals being \$1,253,000,000 against \$1,099,000,000. These include manufactures finished ready for use, manufactures for further use in manufacturing, and foodstuffs partly or wholly manufactured. The greatest increase was in finished manufactures, \$96,000,000. The increase in goods for further use in manufacturing was \$62,000,000.

The balance of trade in favor of the country during the first three months this year has been \$560,000,000, the exports having amounted to \$2,108,000,000, while the imports totalled only \$1,548,000,000.

W. H. BIGELOW

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DISCUSSIONS BY PRACTICAL MEN

Answering "Fixer."

In our issue of May 15th, "Fixer" said that he was having trouble with the tension on his slubbers because the roving on the back row of flyers ran too tight while that on the front row ran too slack.

"Card" answers in the next issue by saying that he had never heard of such a trouble and that he did not think it could occur and another carder who called at our office said the same thing.

Last week, however, "Supt." answered and said that such trouble might be caused by gears of the wrong size and pitch and "Blue Ridge" answered and said that it might not only be caused by the gears, but might also be due to weak and short staple cotton.

In this issue "Anchor" says that the trouble might be due to the curve of the presser or to the manner of wrapping the roving around the presser.

Beginning with the statement that no such trouble could occur we now have answers giving four possible causes for the trouble with remedies for each and we would like to hear from some other carders on this subject as it is evidently an unusual trouble, and one with which only experienced men know how to deal.

Question on Drafts.

Editor:

I wish you would publish the following on your Discussion Page:

What is the best draft to use in the machines in a mill making No. 8 yarn and using very good upland cotton?

I wish several of the boys would tell me through this paper what drafts they have found to be the best on all the machines from pickers to and including spinning frames.

Learner.

Answer to Fixer.

Editor:

I notice "Fixer" asked a question about his tension and variations in his roving from his slubbers.

If he will bend the fingers on his flyers so as to have more of a circle to them, so the roving will pull harder on them and make them press the bobbins tighter he will get rid of his trouble.

The flyer fingers being too straight, has the same effect on the roving that there would be if it was only wrapped around the finger once or twice. Roving from the back row of spindles on all frames weigh heavier than the roving from the

front row, because they are closer to the rollers and don't stretch as much as the front row.

Let us hear from you after trying this.

Anchor.

Answer to R. P. C.

Editor:

Replying to "R. P. C.'s" question in regard to a rule for finding the length of a cross belt, will say: I know of no rule that will give the exact length, but will give one that is near enough for practical use.

To one-half the product of the sum of the diameters of the driving and driven pulleys, and 3.1416, add twice the square root of the sum of the square of the distance between the centers of the shafts and the square of one half the sum of the diameter of the driving and driven pulleys.

Example: The distance between the center of the shafts is 12 feet and the pulleys are 2 and 3 feet respectively.

$$2+3=5$$

$$5 \times 3.1416 = 15.708$$

$$15.708 + 2 = 7.854$$

$$12 \times 12 = 144$$

$$2+3=5$$

$$5 \div 2 = 2.5$$

$$2.5 \times 2.5 = 6.25$$

$$144 + 6.25 = 150.25$$

$$\text{Sq. Root of } 150.25 = 12.25$$

$$12.25 \times 2 = 24.5$$

$$24.5 + 7.854 = 32.354 \text{ feet of belt.}$$

H. J. C.

Answer to R. P. C.

Editor:

Below I will try to give "R. P. C." an answer to his question about the cross belt. The rule is:

"To one-half the product of the sum of the driving and driven pulleys and 3.1416, add twice the square root of the sum of the square of the distance between the centers of the shafts and the square of one-half the sum of the diameter of the driven pulleys are respectfully

Example:

A counter shaft is to be driven from the main shafts, the distance between the centers is 12 feet and the driven pulleys are respectfully 2 and 3 feet in diameter.

$$(2 \times 3) \times 3.1416$$

$$= 7.854$$

$$2$$

$$2 \times 3$$

$$2 \times \text{sq. root of } 122 + \left(\frac{2 \times 3}{2}\right)^2 =$$

$$2$$

$$2 \times \text{sq. root of } 144 + 2.5^2 =$$

$$2 \times \text{sq. root of } 144 + 6.25 =$$

$$2 \times \text{sq. root of } 150.25 =$$

$$2 \times 12.25 = 24.5$$

$$24.5 + 7.854 = 32.354 \text{ feet of belt.}$$

The above rule is not absolutely accurate, but is near enough for all practical purposes where it is impossible to get the length of the belt by measurement. Further it is the only rule I know of and I hope it will fill the brother's bill.

Now I would like to ask a question myself. What would be the re-

suits from a drawing frame (second drawing) that has trumpets which have different sizes of holes in them? Say some of them were reamed or drilled out with different size "bits."

J. A. S.

Program of Southern Textile Association Meeting.

First Session.

3 P. M., Friday, June 20th.

Address of Welcome by Mayor of Charleston, S. C.

Response to Address of Welcome by M. P. Meikleham, Lindale, Ga.

Annual Address of President by T. M. McEntire, Gastonia, N. C.

Address "Evolution of the Cotton Card," by Chas. Mills, Consulting Expert of the Saco-Lowell Shops, Boston, Mass.

Address, "Increasing the Efficiency of the Operative," by David Clark, Charlotte, N. C.

Address, "Proper Methods of Handling Waste," by Sewell K. Oliver, Clumbia, S. C.

Address, "The Weave Room," by R. J. Smith, Henrietta, N. C.

Second Session.

8 P. M., Friday, June 20th.

Election of Officers.

Business Meeting.

Smoker.

Saturday, June 21st.

Saturday will be devoted to pleasure including a free ride on the ocean.

All meetings will be held at the Isle of Palms Hotel, Isle of Palms, S. C.

Large Meeting Predicted.

The Isle of Palms Hotel writes us: "From the number of reservations we have already booked it is evident that the meeting of the Southern Textile Association will be a great success."

The Isle of Palms is 9 miles from Charleston, S. C., and is reached from Charleston by boat and ferry.

Mrs. Doffer's Boys.

One of the government's inspectors going from village to village to gather dots about the conditions of the mill people and the mills. The lady inspector was being carried around by one mill superintendent when her eye fell on a gang of little doffer boys that play about two-thirds of the time around every mill. Evidently the lady thought she had come across something very interesting in the 25 or 30 boys that were frolicking around and asked:

"What little boys are those, Mr. Superintendent?"

"They are the little doffer boys," he answered.

"Goodness," she exclaimed, "how many girls has Mrs. Doffer?"—Charlotte Chronicle.

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C. L. Taylor Spinner
Lee Hughes Twisting
C. N. Simmons Engineer
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Toxaway Mills.

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SOUTHERN TEXTILE BULLETIN

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THURSDAY, JUNE 5

Want to Legislate For Us.

At a largely attended meeting of the textile manufacturers around Philadelphia, Pa., last week called by Joseph R. Grundy, proprietor of William H. Grundy & Co., worsted weaving and knitting yarns, it was decided to invite the National Child Labor Committee, the Consumers' League and organized labor generally to co-operate in a campaign for uniform factory laws in all the big industrial states.

In other words because the textile manufacturers around Philadelphia have trouble some of them have organized to try to put those same troubles upon the other States meaning chiefly the Southern States.

There has long been a suspicion that Dr. A. J. McKelway and the other professional agitators received a good part of their financial support from textile interests around New York and Philadelphia but this is the first time that those interests have openly admitted that they were interested in such matters.

The Southern States are fully able to look after their own laws and resent the interference of envious competitors.

The Largest Cotton Mills in Each Country.

We have in the past given a list of all cotton manufacturing companies in the United States and in England owning as many as 200,000 spindles or 4,000 looms.

The only mills attaining to this class in Germany are those of Gerritt van Delden & Co. with 220,000 spindles, located at the little villages of Gronau in Westphalia near the Dutch frontier; and the Leipsiger Baumwoll-Spinnerei with 206,000 spindles at Leipsig-Lindenau in northern Saxony. There is no mill in Germany with as many as 4,000 looms.

In Russia there are four mills of this size. The largest one is the Manufacture de Krenholm with 461,900 spindles and 3,028 looms, located at the small town of Narva near St. Petersburg. It was built in 1856 and is operated by water-power from the Narva river. La Manufacture de Jaroslav, at Jaroslav near Moscow, has 277,100 spindles and 1,570 looms; the firm of Ch. Cheibler at Lodz in Russian Poland has 253,000 spindles and 4,826 looms; and the Poznanski Mills,

also at Lodz, has 138,300 spindles and 4,437 looms.

The largest cotton manufacturing establishment in Italy is the Societa Italiana per l'Industria dei Tessuti Stampati, owned and operated by E. de Angeli & Co. This is located at Milan and has a capital of 20,000 lire or \$3,860,000. It is, as its name indicates, primarily a print works, but in addition to 46 printing machines and 4,000 feet of tables for hand-printing it has 70,000 spindles and 4,000 looms. This establishment handles about forty per cent of the output of printed goods in Italy.

In Japan the most important company is the Kanegafuchi Boseki (Kanegafuchi Spinning Company) which owns nine mills with a total of 218,080 spindles and 100 looms. The headquarters of the concern is at Kobe and the capital Yen 5,083,400, which is \$2,895,000.

In Canada the tendency is towards amalgamation and there are now only three concerns of any importance. The largest is the Dominion Textile Co., Ltd., of Montreal, which owns 408,932 spindles and 10,111 looms and this is followed by the Montreal Cotton Co. with 173,536 spindles and 4,428 looms.

In the following list we give the name, location, and size of the largest cotton spinning company and the largest cotton weaving company in each of the main countries. Where only one company is shown it means that this one excels in both spinning and weaving.

| Country | Largest Establishment | Headquarters. | Spindles | L's |
|-------------|--|-------------------|-----------|--------|
| England | Fine Cotton Spinning & Doublers' Association | Manchester | 3,000,000 | |
| | Horrockses, Crewdson & Co., Ltd. | Preston | 250,000 | 9,530 |
| U. S. | Amoskeag Mfg. Co. | Manchester, N. H. | 620,000 | 22,200 |
| Germany | Gerritt van Delden & Co. | Gronau | 220,000 | |
| | Mech. Baumwoll Spinnerei und Weberei | Augsburg | 126,940 | 2,920 |
| Russia | La Manufacture de Krenholm | Narva | 461,900 | 3,028 |
| India | Jacob Sassoon Mill | Bombay | 92,840 | 1,810 |
| | Century Sp. & Mfg. Co. | Bombay | | 2,015 |
| Austria | Johann Liebig & Co. | Riechenberg | 131,856 | 2,400 |
| Hungary | Ungarische Textilindustrie A-G | Rozsahegy | 104,000 | 2,150 |
| Italy | Cotonificio Valle Seriana | Cazzaniga | 135,000 | 1,800 |
| | E. de Angeli & Co. | Milan | 70,000 | 4,000 |
| Japan | Kanegafuchi Boseki | Kobe | 218,080 | 100 |
| | Miye Boseki | Yokkaichi | 150,208 | 2,501 |
| Switzerland | Spinners in von Heinrich Kunz | Zuירch | 179,520 | |
| | Georges Wild & Cie. | Eschenbach | | 840 |
| Brazil | Fiacao e Tecidos Allianca | Rio Janeiro | 56,000 | 1,336 |
| | Fabrica Mariangela | Sao Paulo | 36,000 | 1,700 |
| Canada | Dominion Textile Co. Ltd. | Montreal | 408,932 | 10,111 |
| China | Ewo Cotton Sp. & Weaving Co. | Shanghai | 72,354 | 500 |
| | Hupei Government Cotton Mill | Wuchang | 40,000 | 1,000 |
| Mexico | Comp. Industrial de Orizaba, S. A. | Orizaba | 70,700 | 3,737 |

It is seen from the above that the spells and the long wet spells—are largest spinning company in the against the growth of cotton on a world is English, but that the large large scale.—Consular Reports.

est company combining spinning and weaving is American.

Cotton Schedule to be Advanced.

It is now generally understood that the cotton schedule of the Underwood bill will be amended in the Senate. The change as reported will be to advance the lowest duty from 5 per cent to 10 per cent and advance all of the other duties 2 1-2 per cent. An additional duty of 5 per cent will be allowed when goods or yarns are combed, dyed, bleached or printed.

If this change is made by the Senate and confirmed in conference it will fix the tariff at about half way between the Underwood bill and the American Cotton Manufacturers' Association schedule.

Cotton in Africa.

During the first three months of 1913 there were 1,982 bales of cotton, or 766,640 pounds, valued at \$97,501, exported from Southern Nigeria, West Africa, against 971 bales, or 381,808 pounds, valued at \$37,529, during the first three months in 1912. The local price obtained for this cotton ranged from 9 to 13 cents per pound. Though this is an increase over previous years, and the prospects, as stated recently by the president of the British Cotton Growing Association are that West Africa will produce a crop this year of quite 20,000 bales, the tendency is toward no large production for export from West Africa during the near future, the production per acre being too small, averaging not over 200 pounds. The climatic conditions—the long dry

**BYRD TEXTILE MACHINERY AND
SUPPLY CO.**

DURHAM, N. C.

Manufacturers of and Dealers in

MILL SUPPLIES, MACHINERY, ETC.

N. C. SELLING AGENTS

DOUGLAS & CO'S. MILL STARCHES.**CARDS,
DRAWING,****COTTON
MILL MACHINERY****SPINNING
FRAMES,****MASON MACHINE WORKS**

TAUNTON, MASS.

EDWIN HOWARD, Southern Agent
Charlotte, N. C.**COMBERS,
LAP MACHINES****MULES,
LOOMS.****PERSONAL NEWS**

J. H. Steinfeld has resigned as overseer of weaving at the Imperial Cotton Mills, Eatonton, Ga.

D. F. Rowe, of Montgomery, Ala., is now grinding cards at Union Springs, Ala.

S. E. Allen, of Union Springs, Ala., is now second hand in carding at the Dallas (Texas) Cotton Mills.

W. T. Burk has resigned as second hand in carding at the Dallas (Texas) Cotton Mills.

C. D. Skidmore is now overseer of spinning at the Wadesboro (N. C.) Cotton Mills.

M. H. Trull, of Gibsonville, N. C., is now second hand in carding at Pomona Mills, Greensboro, N. C.

E. W. Spradley, of Gibsonville, is now second hand in spinning at Pomona Mills, Greensboro, N. C.

J. W. Ward, of Haw River, N. C., is now section hand in speeder room, Pomona Mills, Greensboro, N. C.

T. J. Lapradde, of Gibsonville, N. C., is now section hand in spinning at Pomona Mills, Greensboro, N. C.

L. S. Christopher, of Gibsonville, N. C., is section hand in spinning at Pomona Mills, Greensboro, N. C.

H. L. Jay is now overseer of weaving at the Imperial Cotton Mills, Eatonton, Ga.

C. L. Cody, of Fairmont, S. C., is now section hand at the Saxon Mills, Spartanburg, S. C.

V. B. Sage has been promoted to second hand at the Dan River Mills, Danville, Va.

H. E. Simpson is now engaged in the mercantile business at Greer S. C.

Irwin Moore, overseer of dyeing at the Cliffside (N. C.) Cotton Mills, has purchased an automobile.

Sales has accepted the position of master mechanic at the Patterson Mills, Roanoke Rapids, N. C.

M. C. Ewing is now second hand in spinning at the Patterson Mills, Roanoke Rapids, N. C.

Duncan has resigned as second hand in spinning at the Henderson (N. C.) Cotton Mills.

C. L. Price, of Warrenton, N. C., is now overseer of spinning at the Patterson Mills, Roanoke Rapids, N. C.

A. A. Freeman, overseer of spinning at the Riverside Mills, Danville, Va., is reported to be confined to his bed by a severe illness.

J. L. Scruggs time-keeper at the Cliffside (N. C.) Mills has been for some time confined to his home by illness.

Dave Greusshaw has been promoted from second hand to overseer of night spinning at the Apalache Mills, Arlington, S. C.

Ed Mullins has changed from night overseer of spinning to a similar position on the day run at the Apalache Mills, Arlington, S. C.

Henry Harrison has resigned as overseer of weaving at the Tarboro (N. C.) Cotton Factory to accept a similar position at the Roanoke Mills, Roanoke Rapids, N. C.

Geo. Cash has resigned as master mechanic at the Limestone and Hamrick Mills, Gaffney, S. C., to accept a position at Parr Shoals, S. C.

Frank Ward has resigned as overseer of weaving at Mobile, Ala., and accepted a position at Columbus, Ga.

F. C. Hall, of Taunton, Mass., has accepted the position of superintendent of the Lumberton (N. C.) Cotton Mills.

Ernest Langley, of Charleston, S. C., has returned to his former position as machinist at the Manetta Mills, Lando, S. C.

McKeown has resigned his position with the Odell Hardware Co. to become outside overseer at the Lancaster (S. C.) Cotton Mills.

R. H. Banks has resigned as second hand in spinning at the Patterson Mills, Roanoke Rapids, N. C., to accept a similar position with the Henderson (N. C.) Cotton Mills.

W. H. Deal has resigned as overseer of spinning at Edenton, N. C., and accepted a position with the Halifax Paper Co., Roanoke Rapids, N. C.

W. C. Humphries has resigned as master mechanic at the Patterson Mills, Roanoke Rapids, N. C., to accept a similar position with the Aurora Mills, Burlington, N. C.

J. L. Reinhart has resigned as section hand in spinning at the Buffalo (S. C.) Mills to become second hand in spinning at the Ottaray Mills, Union, S. C.

J. H. Moore, who has a position in the card room of the Henrietta (N. C.) Cotton Mills, was called away last week on account of the death of his father.

J. R. Wood, of the Unity Mills, LaGrange, Ga., attended the Odd Fellows' Convention at Savannah, Ga., last week.

J. C. Foster, of Hartsville, S. C., has accepted the position of superintendent of the Vardry Cotton Mills, Greenville, S. C.

H. E. Harden has resigned as second hand in spinning at the Newnan (Ga.) Mfg. Co. and accepted a position with the Valley Creek Mills, Selma, Ala.

H. A. Barnes, formerly overseer of spinning at the White Oak Mills, Greensboro, N. C., will be superintendent of the Proximity Print Works, of Greensboro, N. C.

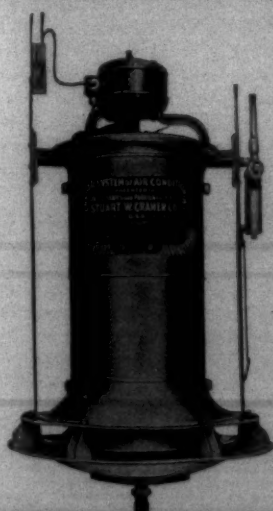
E. R. Fuqua, of the Glen Raven Mills, Burlington, N. C., has accepted a position as second hand in spinning at the Minneola Mills, Gibsonville, N. C.

W. F. Chaffin, formerly of the Standard Knitting Mills, Knoxville, Tenn., has become overseer of spinning at the Richmond Hosiery Mills, Rossville, Ga.

H. Lee Dearman has resigned as superintendent of the Lakeside Mills, Burlington, N. C., and will on July 1st become superintendent of the Dixie Mills, Mooresville, N. C.

OVERFLOW PERSONALS, PAGE 16**Lydia Mills.****Clinton, S. C.**

| | |
|---------------|----------------------|
| T. N. Crocker |Supt. |
| M. H. Hall |Carder |
| M. M. Coggins |Spinner |
| J. H. Hearne |Weaver |
| D. Rhoden |Cloth Room |
| Kelly Johns |Outside |
| C. O. Wilson |Master Mechanic |

**Cramer System of Air Conditioning**

WITH OR WITHOUT

Automatic Regulation of Humidity and Temperature

Moderate in Cost

Cheap to Operate

Yields Big Returns

STUART W. CRAMER

CHARLOTTE,

NORTH CAROLINA

MILL NEWS ITEMS OF INTEREST

Hickory, N. C.—W. S. Stroup will install a knitting goods mill in the Umstead building.

Columbus, Miss.—The Tombigbee Mills have placed contract with Fred H. White, of Charlotte, N. C., for 90 Ideal Automatic looms to be delivered by the Stafford Co., of Readville, Mass.

Greenville, S. C.—The Greenville Thread Company, recently reported as incorporated with a capital stock of \$25,000, has organized with Kerr Wilson, president, and J. B. Burgard, secretary.

Augusta, Ga.—The Riverside Mill will double the capacity of its bagging department. A \$17,000 building will be erected and new machinery to cost about \$75,000 will be installed.

Gaffney, S. C.—The electric motor in one of the weave rooms of the Hamrick Mills was burned out during a storm last week. It caused considerable loss of time to the mill.

Statesville, N. C.—Many improvements as well as additions are being made by the Paola Mills. They have recently added 5,376 spindles, 2,668 twisting spindles, 5 spoolers and 4 reels. This week the company will begin to operate a night force.

Wichita Falls, Tex.—Frank Kell, recently mentioned in connection with the proposed \$500,000 cotton mill for this place, states that the organization has not yet been perfected, and that stock subscriptions are now being solicited.

LaPorte, Ind.—The LaPorte Woolen Mills have added two water-tube boilers of 800 horsepower each, and have increased their spinning capacity 25 per cent by changing their cards from 48 to 60 ends. The addition to the power plant represents an expenditure of \$50,000.

Atlanta, Ga.—A jury before Supreme Court Justice Donnelly in New York has returned a verdict of \$1,039 in favor of the Fulton Bag & Cotton Mills against the Echeta Cotton Mills. The plaintiff alleged a breach of contract for the sale and delivery of merchandise on the part of the defendant.

Richmond, Cal.—Excavations for the proposed new \$100,000 woolen mill that is to be erected in the northern part of this city have started. It is said by the projectors that there will be five buildings in the plant, the larger one to be four stories high. Material will arrive this month. Orders for the machinery have been placed in the east. They include equipment for a knitting plant which will be operated in conjunction with the main mill.

Dallas, Tex.—C. H. Thomas, of the Dallas Waste Mills, will build a cotton bagging mill in this city.

Richmond, Va.—A. T. Shepherd and Chas. K. Bryant are preparing plans for the erection of a cotton mill.

Terra Alta, W. Va.—The Terra Alta Woolen Mills have decided to discontinue business. All assets of the corporations are being converted into cash and the debts are being paid.

Yorkville, S. C.—The addition to the Ancona Mills, (formerly York Cotton Mills) will be 75x300 feet. The mill will be changed from steam to electric drive. It is now owned by J. W. Cannon and sons of Concord, N. C.

Lockhart, S. C.—A large dam is to be built at once on the Broad River about a mile above the Lockhart Mills, to furnish power for that place. The developing plant is to be done by the Lockhart Power Co., and they have awarded the contract to construct a solid masonry dam. It is understood that the dam will be 1,500 feet long and 44 feet high, to cost about \$150,000.

Greenville, S. C.—The State Board of Health has issued an order requiring all corporations which have private sewerage lines to put in aseptic tanks. The object of this order is to prevent the emptying of crude sewage into the various small streams which run through some of the mill districts. It is understood that this order will affect a number of the mills around Greenville. The installation of these aseptic tanks is to be done at once, it is understood.

Stevenson, Ala.—The Stevenson Cotton Mills, recently reported as awarding contracts for additional machinery, state that they have added 480 twister spindles, 200 spooler spindles. The plant now operates an equipment of 3,120 spinning spindles, the weekly output being about 15,000 pounds of yarn.

Social Circle, Ga.—A cottage in the Social Circle Mill village was struck by lightning Monday morning of last week, the flash setting fire to it completely destroyed the house with all household goods. The building was occupied by John Beam, the nightwatchman at the mill and there being no one at home all of his household effects were lost.

There was considerable excitement on the streets when the blaze was first seen as it looked as if the mill building was burning and the alarm was started that the cotton mill was on fire and a large crowd was quickly on the scene.

Baltimore, Md.—The Hooperwood Mill of William E. Hooper & Sons Co., at Woodberry, has been recently enlarged and it is said is now the largest cotton mill in Maryland. There is more than an acre of space on each floor, and it employs more than 550 persons. It contains the latest machinery and its motive power has been changed from steam to electricity. The mill was built in 1904 and its recent enlargement makes it twice the original size.

Long Beach, Cal.—A local construction company has been awarded contract for the building of the \$200,000 plant of the California Woolen Manufacturing Co. on Inner Harbor Tract, as previously noted. Ground was broken some time ago and the actual construction will be started at once.

S. J. Kent, president of the company, stated that the construction work will be rushed and that he expected the mill would be in full operation about Oct. 1. Seventy-five per cent of the woolen goods to be manufactured by the mill, it is said, has been contracted for in advance by Los Angeles firms and the corporation may decide to enlarge the plant beyond the present plans.

The Long Beach Chamber of Commerce has investigated the scope of the woolen industry, and in a formal resolution has endorsed the project of the company, as well as the personnel of its officers.

Baltimore, Md.—A statement issued by interests concerned in the refinancing of the International Cotton Mills Corporation and its allied companies says:

"Plans in regard to the operations of the Mount Vernon-Woodberry Cotton Duck Co. were acted upon at the meeting of the directors held in New York on Friday. This is in connection with the refinancing of the business of the International Cotton Mills Corporation. As a result of the refinancing of the business of the corporation, the selling house, the J. Spencer Turner Co. will be relieved of considerable current financing in connection with the International mills.

"The J. Spencer Turner Co., in connection with the same refinancing, is also to be supplied with \$800,000 of additional working capital. This permits an arrangement to be made between the J. Spencer Turner Co. and the Mount Vernon-Woodberry Cotton Duck Co., under which the Turner company is to take care of the financing of the operations of the Mount Vernon-Woodberry Cotton Duck Mills.

"Heretofore the operations of these mills have been handicapped by the fact that the Mount Vernon-Woodberry Cotton Duck Co. was deficient in working capital and was thus greatly hampered in handling its business. This difficulty will be

removed by the arrangement with the J. Spencer Turner Co."

At the time of the directors' meeting it was stated that the session had no significance, routine business taking up most of the time.

Putnam City, Okla.—W. B. Smith Whaley, promoter of the Cotton Mills Securities Company has issued a statement saying that by the investment of \$100 each in bonds secured by real estate 900 men will make it possible for the immediate construction of the building planned by the Cotton Mills Securities Co. Ninety-thousand dollars in addition to the \$410,000 already invested by the Oklahoma citizens in the bonds of the Cotton Mills Securities Co. will insure the beginning of active building work on the cotton mill within a few months.

To provide money for the erection of the cotton mill, a bond issue secured by real estate, owned by the company, was voted a short time ago amounting to \$500,000. Of this issue \$410,000 is said to have already been taken up by the Oklahoma investors.

The Cotton Mills Securities Co. is incorporated with a capital stock of \$10,000,000 and have plans drawn for the erection of what is proposed to be the largest cotton mill ever erected at the beginning of operation. It is to contain 15,000 looms

Anderson, S. C.—J. Dexter Brown, proprietor of the Dexter Grocery Company, one of the most successful wholesale concerns in the state, has accepted the responsibility of acting as president of the Cox Mill if plans can be put through to get the amount of money necessary to get the release from the receivership.

A few local business men had a meeting last week and decided they would try to organize a company to take over the property, which is now in the hands of a receiver and has been offered for sale twice but found no bidders.

This property has been appraised by competent mill men at from \$450,000 to \$500,000, and the last upset price made by the court was \$200,000.

It is the opinion of conservative business men that if this property could be bought at a price of \$250,000 or less it would be a good purchase, in fact it is figured with conservative management and the application of sound business methods, the mill could be made to pay a fair dividend on the worth of the plant, \$500,000, which would mean a large dividend on the amount of the purchase price.

It was decided at this meeting that the old stockholders should first be offered the stock of this new company, it is believed it will be the means of their getting back a large portion of their loss, and unless they come in on this proposition

Thursday, June 5, 1913.

their stock in the old company will be a total loss.

J. Dexter Brown, who will be president if the new organization is perfected had no stock in the old company but will take a large amount in the new organization.

Thayer Mill Sold.

The Thayer Mill located at Paw Creek, N. C., near Charlotte, was on Monday, June 2nd, sold to the Thrift Mfg. Co., at public sale for \$186,000 in cash and stock in the company.

The sale was in reality but the formal reorganization of the mill. The new company, the organization of which has been previously announced, will install machinery at once and as the buildings are already completed expect to begin operations early in the Fall.

Mill Officers Were Indicted.

C. L. Perkins, who is president of the Massey-Perkins Hosiery Mills Columbus, Ga., and J. K. King, who is superintendent of the same institution, were indicted by the Muscogee county grand jury Saturday on a misdemeanor charge.

It is stated that the indictments grew out of the alleged fact that the mill officials did not provide suitable places for the women operatives in the mills to have seats while they are not on duty, it being a misdemeanor under the Georgia code not to provide such places. E. E. Melton was the prosecutor, and before the grand jury and testified.

Apalache Mill Picnic.

The picnic held by the Apalache Mill school, Arlington, S. C., was the feature of the closing of the session. A large crowd was present and the tables were bountifully supplied with all manner of good things to eat. The most admired ornament on the table was the handsome loving cup which was recently won by the Apalache track team.

Easton & Burnham to Have New Buildings.

The Easton & Burnham Manufacturing Co., of Pawtucket, R. I., builders of spoolers and reels, have broken ground and commenced work on three brick buildings, it being necessary to vacate the present plant because of alterations made by the New York, New Haven and Hartford Railroad Co. in the building of a new roadbed.

Plans call for the erection of three buildings, the largest of which will be 300 feet by 76 feet. A chimney 75 feet high will also be erected. The office of the plant will be in the main building.



Just in Passing

Competition is a peculiar thing. It make make enemies out of lifelong friends—if it's a political contest.

THE TURBO HUMIDIFIER

has met competition in but one way; the only way, in fact. It has delivered the goods, and where it hasn't, and I admit that there were things at first that we did not get on to, our education did not cost our customers a penny.

The great big business world is ruthless in its judgments of service rendered, and unless the service is rendered somebody loses.

Get Turbofied—and satisfied.

THE G. M. PARKS CO.
FITCHBURG, MASS.

Southern Office, No. 32 West Trade St., Charlotte, N. C.
B. S. COTTRELL, Manager

United States Second in Canadian Cotton Exports.

The United States is second only to Great Britain in supplying cotton goods to Canada, says a report just made by the bureau of foreign and domestic commerce. In 1900 Great Britain supplied 67 per cent of Canada's needs in cotton goods, the United States 23 per cent. Last year, Great Britain furnished 63 per cent, this country 26 per cent.

Canada's cotton goods purchased in 1900 amounted to \$6,900,000; in 1912 to \$22,800,000. The report declares that the Canadian mills are not keeping pace with home demands for cotton goods but that they are enlarging.

Mason Machine Works to Move Office to Greenville.

Announcement has been made of the transfer of the Southern office of the Mason Machine Works from Charlotte to Greenville, S. C. Edwin Howard, Southern agent, has signed papers for the lease of elegant quarters on the ground floor of the new Masonic building there. The transfer will be effected within the next 90 days.

The Southern office of the Mason Machine Works has been located in Charlotte for the past 15 years. D. A. Tompkins had the agency for 4 years but in 1902 they opened an office and placed Edwin Howard in charge.

Mr. Howard has been an active and successful representative and has developed the Southern business of the Mason Machine Works on a very large scale.

He has been especially successful in the Greenville section and in the City of Greenville there are now 250,000 spindles of the Mason Machine Works.

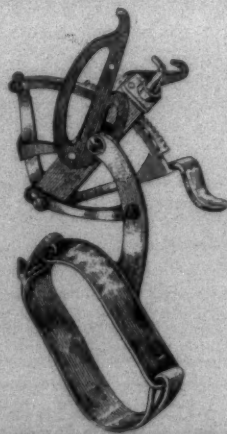
The business men and manufacturers of Greenville have for some time been making a special effort to induce Mr. Howard to move his office to their city and in deciding to make the change he has been largely influenced by the fact that he would be in closer touch with the largest users of the machinery of the Mason Machine Works.

Within a radius of 75 miles from Greenville there are 3,250,000 spindles. There are 31 mill presidents residing in that city and the purchasing departments of 48 big mills are located there.

The Saco-Lowell Shops have a branch office in Greenville, but the Mason Machine Works are the first of the big machinery manufacturers to locate their Southern office in that city.

The Byrd Knotter

Price \$20.00



Simple of Operation
Durability Guaranteed
Small Repair Cost

Byrd Manufacturing Co.
DURHAM, N. C.

AMERICAN MOISTENING COMPANY

BOSTON, MASSACHUSETTS

WILLIAM FIRTH, President

FRANK B. COMINS, Vice-Pres. & Treas.

THE ONLY PERFECT SYSTEM OF AIR MOISTENING
COMINS SECTIONAL HUMIDIFIER

JOHN HILL Southern Representative, Third Nat. Bank Building, ATLANTA, GEORGIA

Cotton Goods Report

New York. — The cotton goods market maintained strength and broadened in some directions last week. Converters for the clothing trades found it necessary to renew their supplies of twills and sateens for lining purposes, and they bought in some instances for delivery running until the end of the year.

Gray goods opened up strong the first of the week with business fairly active, but as the week closed, demands quieted down, while prices, especially on spots, remained very firm. Two days' trading were eliminated because of the general closing up of all the leading cotton goods houses on Friday and Saturday. The features of the market was not found so much in demand for goods as it was in the higher prices asked and paid for spot merchandise of standard construction. Mills in the East closed up generally for the holiday, while a number of them granted an additional half-holiday on Saturday morning. Brokers and commission houses look for an easing up in purchasing on the part of converters due to the active buying of the preceding week.

Converters have purchased goods in such quantities for spot and nearby deliveries that the market on print cloths and standard constructions of other classes has stiffened up perceptibly. Toward the close of the week, even though converters were willing to pay a premium for print cloths for spot delivery, the goods were hard to secure. On contract, a number of constructions were selling one-eighth cent lower than the same cloths could be had for immediate and nearby deliveries. For example, 800 squares, 4 yard, could be had in the market at 7 cents for contract, but mills were asking 7 1-4 cents for spots while it was out of the question to secure goods for immediate and nearby delivery at anything like the quotation current for contracts.

In looking over the results for May commission men state that they have moved more goods than they expected to. It is true that the usual forward orders placed during the month have not been up to normal, but at the same time the mills are not carrying anywhere near the stocks they were at this time last year. Jobbers' sales have not been as heavy as they would have been, had May been a warmer month. It is hoped that before the end of June, the tariff question will have been settled, and both retailer and jobber will have more confidence in the future.

Some lines of underwear for next spring have been opened up, and the price changes are so few on the lines shown, that they are practically on the same basis as the opening last year. On union suits one advance was named of 25 cents a dozen, but the advances on standard lines of this sort are never as numerous as they are on two-piece

suits. In the carpet and rug trade the advance business put through has been very satisfactory, and some agents are reported as getting ready to withdraw lines in addition to those already withdrawn. Several large manufacturers are still refusing to accept business beyond July, and are getting all they can handle for the next two months.

There was fairly good trading in the Fall River cotton goods markets last week, and sales will exceed 200,000 pieces, the largest total for some time. It is known that on a few styles advances ranging from a sixteenth to a quarter of a cent a yard have been made, but even at these prices manufacturers have not shown a willingness to sell. On brown sheetings and other coarse makes prices have become firm, and advances have been asked on some styles.

Prices were quoted as follows:
 Prt clths, 28-in std 3 3-4 —
 28 1-2-in, std. 3 1-2 —
 4-yd, 80x80s 7 1-8 to 7 1-4
 Gray goods, 39-in., 69
 x72 5 1-2 to 5 5-8
 38 1-2-in. std 5 1-8 —
 Brown drills, std .. 8 —
 Sheetings, south-
 ern std 7 3-4 to 8
 3-yd 7 1-8 to 7 1-4
 4-yd, 56x60s 6 to 6 1-8
 Denims, 9-oz. 14 to 17
 Stark, 8oz, duck ... 14 —
 Hartford, 11-oz., 40-
 inch duck 16 1-8 —
 Tickings, 8-oz. 13 3-4 —
 Std fancy prints .. 5 1-2 —
 Std gingham 6 3-4 —
 Fine dress gingham 7 1-2 to 9 1-4

Weekly Visible Supply of American Cotton.

| | |
|---------------------|-----------|
| May 30, 1913 | 2,653,685 |
| Previous week | 2,979,292 |
| Same week last year | 3,025,774 |

Condition of Cotton 79.1 of Normal.

Washington, June 2.—The newly planted cotton crop of the United States a condition on May 25 of 79.1 per cent of a normal, the United States department of agriculture's crop reporting board announced at noon today. This condition, compiled from the reports of the correspondents and agents of the department's bureau of statistics compares with a condition of 78.9 per cent on May 25 last year, 87.8 per cent on the corresponding date in 1911, 82.0 per cent in 1910, and 79.9 per cent, the average condition for the past ten years in May 25.

The area planted to cotton this year also has been the subject of much speculation in cotton circles but the department of agriculture's official estimate will not be issued until July 3 owing to the passage of the law last year which deferred this annual report from June to a month later.

GRINNELL WILLIS & COMPANY

44-46 Leonard Street, New York

SELLING AGENTS

BROWN AND BLEACHED COTTON GOODS FOR HOME EXPORT MARKETS

RICHARD A. BLYTHE

(INCORPORATED)

Cotton Yarns Mercerized and Natural

ALL NUMBERS

505-506 Mariner and Merchant Building

PHILADELPHIA, PA.

The Desirability of the South

as the place to manufacture cotton goods is illustrated in the increase of 67% quoted by census department. We can offer attractive situations for those desiring to enter this field.

J. A. PRIDE

General Industrial Agent, Seaboard Air Line Railway

NORFOLK, VIRGINIA.

When you enjoy the economy of lubrication provided by



you discover that increased production means a great deal more than a slightly lower lubricant expense.

Figure out the saving involved in a 50% reduction of oil stains in your Carding, Twisting and Spinning. Then write us for test samples of NON-FLUID OIL for Comb-boxes, Roll Necks and Twister Rings.

SOLE MANUFACTURERS

New York & New Jersey Lubricant Co.
 165 Broadway, NEW YORK

IMPROVED INMAN AUTOMATIC BANDING MACHINES

MANUFACTURED BY
 COLE BROTHERS
 PAWTUCKET, R. I.



The only automatic machine in the world for making loop bands for spinning frames. Superior quality of bands without any cost of making. All bands exactly alike and no stretch of bands after they are put on. Saves child labor.

Also Beaming Machine to beam on to slasher beams.
 JOHN HILL, Southern Agent, 3rd National Bank Building, Atlanta, Ga

The Yarn Market

Philadelphia, Pa. — Some dealers claimed a good volume of business last week, while others said that business was slow. There were a few sales of 20,000 to 70,000 pounds for future delivery, but most of the trading was for small quantities for prompt or spot delivery. Although many manufacturers are inclined to talk pessimistically about the future, they are doing a good business at present and have orders booked for several weeks ahead.

Manufacturers of carded yarn hosiery are reported as doing a good business and as having good prospects for its continuation. Dealers report that there is a fair demand for 14s, 16s, 18s and 20s Southern frame spun cones for spots and quick deliveries. There is a good demand for 10s, 12s and 24s cones and they are scarce for spot delivery. Sales of 10s and 12s were made on the basis of 21 cents for 10s, and sales of prompt delivery were made on the basis of 20 1-2 cents for 10s.

Last week there was a fair demand for single combed yarns 14s to 26s, cones, in quantities of five to ten thousand pounds and there were many sales of from 3 to 10 cases. Southern frame combed peeler cones sold on the basis of 25 and 25 1-2 cents for 10s.

Weavers are still buying from hand to mouth and when they want yarn they want it in a hurry. There are a few exceptions to this, as some of them have confidence in the future and are buying for future needs on a scale-down of prices.

Southern Single Skeins.

| | | |
|----------|----|---------|
| 4s to 8s | 18 | —18 1-2 |
| 10s | 19 | —19 1-2 |
| 12s | 19 | 1-2-20 |
| 14s | 20 | —20 1-2 |
| 16s | 20 | 1-2-21 |
| 20s | 20 | —20 1-2 |
| 26s | 22 | 1-2-23 |
| 30s | 24 | — |

Southern Two-Ply Skeins:

| | | |
|-----|----|---------|
| 8s | 18 | 1-2— |
| 10s | 19 | — |
| 12s | 19 | 1-2— |
| 14s | 20 | —21 |
| 16s | 20 | —21 |
| 20s | 21 | —21 1-2 |
| 24s | 23 | 1-2— |
| 26s | 24 | — |
| 30s | 24 | —24 1-2 |
| 40s | 29 | —30 |
| 50s | 41 | —42 |
| 60s | 49 | —50 |

Carpet and Upholstery Yarn in Skeins:

| | | |
|------------------|----|---------|
| 8-4 slack | 20 | 1-2— |
| 9-4 slack | 19 | 1-2— |
| 8-3-4 hard twist | 18 | —18 1-2 |

Southern Single Warps:

| | | |
|-----|----|---------|
| 8s | 19 | —19 1-2 |
| 10s | 19 | 1-2-20 |
| 12s | 20 | — |
| 14s | 20 | —20 1-2 |
| 16s | 20 | 1-2-21 |
| 20s | 20 | —20 1-2 |
| 24s | 23 | — |
| 26s | 23 | 1-2— |
| 30s | 24 | — |
| 40s | 30 | — |

Southern Two-Ply Warps:

| | | |
|-----|----|---------|
| 8s | 19 | 1-2— |
| 10s | 20 | — |
| 12s | 20 | 1-2— |
| 14s | 21 | —21 1-2 |
| 16s | 21 | 1-2-22 |
| 20s | 21 | 1-2-22 |
| 24s | 23 | 1-2-24 |
| 26s | 24 | — |
| 30s | 24 | —25 |
| 40s | 30 | —31 1-2 |
| 50s | 40 | — |

Southern Frame Spun Yarn on Cones

| | | |
|-----|----|------------|
| 8s | 19 | —19 1-2 |
| 10s | 19 | 1-2-20 1-2 |
| 12s | 21 | —22 |
| 14s | 21 | —21 1-2 |
| 16s | 21 | 1-2-22 |
| 18s | 22 | —22 1-2 |
| 20s | 22 | —23 |
| 24s | 22 | —24 1-2 |
| 26s | 22 | 1-2-25 |
| 30s | 25 | —25 1-2 |

Two-Ply Carded Peeler in Skeins:

| | | |
|-----|----|--------|
| 20s | 25 | — |
| 22s | 25 | 1-2— |
| 24s | 26 | — |
| 26s | 26 | 1-2-27 |
| 30s | 27 | 1-2-28 |
| 36s | 33 | — |
| 40s | 35 | —36 |
| 50s | 44 | —45 |
| 60s | 49 | —50 |

Single Combed Peeler Skeins:

| | | |
|-----|----|-----|
| 20s | 29 | — |
| 24s | 30 | — |
| 30s | 34 | — |
| 40s | 39 | —40 |
| 50s | 45 | —46 |
| 60s | 53 | —55 |

Two-Ply Combed Peeler Skeins:

| | | |
|-----|----|------|
| 20s | 29 | 1-2— |
| 24s | 31 | — |
| 30s | 34 | —35 |
| 40s | 39 | —41 |
| 50s | 45 | —48 |
| 60s | 55 | —56 |
| 70s | 63 | —65 |
| 80s | 70 | —74 |

A. M. Law & Co. F. C. Abbott & Co.

Spartanburg, S. C.

Charlotte, N. C.

BROKERS

BROKERS

Dealers in Mill Stocks and other Southern Securities

Southern Mill Stocks, Bank Stocks
N. C. State Bonds, N. C. Railroad Stock and Other High Grade Securities

South Carolina and Georgia Mill Stocks.

| | Bid | Asked |
|--|--------|-------|
| Abbeville Cot. M., S. C. | 100 | |
| Aiken Mfg. Co., S. C. | 35 | |
| Amer. Spinning Co., S. C. | 154 | |
| Anderson C. M., S. C., pf | 90 | |
| Aragon Mills, S. C. | 65 | |
| Arcadia Mills, S. C. | 91 | |
| Arkwright Mills, S. C. | 100 | |
| Augusta Factory, Ga. | 35 | |
| Avondale Mills, Ala. | 115 | 120 |
| Belton Cot. Mills, S. C. | 100 | |
| Brandon Mill, S. C. | 75 | |
| Brogan Mills, S. C. | 61 | |
| Calhoun Mills, S. C. | 51 | |
| Capital Cot. Mills, S. C. | 85 | |
| Chiquola, S. C., com. | 100 | |
| Clifton Mfg. Co., S. C. | 101 | |
| Clifton Mfg. Co., S. C. pf | 100 | |
| Clifton Cot. Mills, S. C. | 125 | |
| Courtenay Mfg. Co., S. C. | 90 | |
| Columbus Mfg. Co., Ga. | 92 1/2 | 100 |
| Cox Mfg. Co., S. C. | 100 | |
| D. E. Converse Co., S. C. | 85 | |
| Dallas Mfg. Co., Ala. | 110 | |
| Darlington Mfg. Co., S. C. | 75 | |
| Drayton Mills, S. C. | 6 | 80 |
| Eague & Phenix Mill, Ga. | 80 | 90 |
| Easley Mill, S. C. | 180 | |
| Enoree Mfg. Co., S. C. | 25 | 50 |
| Enoree Mfg. Co., S. C., preferred | 100 | |
| Enterprise Mfg. Co., Ga. | 65 | 70 |
| Exposition Mill, Ga. | 150 | |
| Fairfield C. Mills, S. C. | 70 | |
| Gaffney Mfg. Co., S. C. | 65 | |
| Gainesville Cotton Mills, Ga., common | 80 | |
| Glenwood Mills, S. C. | 141 | |
| Glenn-Lowry Mfg. Co., S. C. | 101 | |
| Glenn-Lowry Mfg. Co., S. C., preferred | 86 | |
| Gluck Mills, S. C. | 80 | |
| Granby Cot. Mills, S. C. | | |
| Granby C. M., S. C., pf | | |
| Graniteville Mfg. Co., S. C. | 140 | 145 |
| Greenwood C. Mills, S. C. | 57 | |
| Grendel Mill, S. C. | 100 | |
| Hamrick Mills, S. C. | 102 | |
| Hartsville C. M., S. C. | 170 | |
| Inman Mills, S. C. | 105 | |
| Inman Mills, S. C., pf | 100 | |
| Jackson Mills, S. C. | 95 | |
| King, John P. Mfg. Co., Ga. | 80 | 86 |
| Lancaster C. Mills, S. C. | 130 | |
| Lancaster C. Mills, S. C., preferred | 97 | |
| Langley Mfg. Co., S. C. | 70 | 75 |
| Laurens Mill, S. C. | 45 | |
| Limestone Mill, S. C. | 125 | 133 |
| Lockhart | 40 | |
| Marlboro Mills, S. C. | 60 | 75 |
| Mills Mfg. Co., S. C. | 110 | |
| Molloy Mfg. Co., S. C. | 90 | |
| Monarch Mill, S. C. | 115 | |
| Monaghan Mills, S. C. | | |
| Newberry C. Mills, S. C. | 135 | 140 |
| Ninety-Six Mills, S. C. | 135 | |
| Norris C. Mills, S. C. | 102 | |
| Orangeburg Mfg. Co., S. C., preferred | 90 | |

North Carolina Mill Stocks.

| | Bid | Asked |
|--------------------------------------|--------|-----------|
| Arista | | |
| Arlington | 141 | |
| Avon | | |
| Brown, common | 115 | |
| Cabarrus | 150 | |
| Cannon | 151 | |
| Chadwick-Hoskins | 85 | |
| Chadwick-Hoskins, pfd | 101 | |
| Cliffside | 190 | 195 |
| Cora | 140 | |
| Efird | 115 | 126 |
| Erwin, common | 130 | 150 |
| Erwin, preferred | 105 | |
| Gaston | 90 | |
| Gibson | 101 | 105 |
| Gray | 121 | |
| Florence | 124 | |
| Henrietta Mills | 150 | 155 |
| Highland Park | 186 | 155 |
| Loray | 10 | |
| Loray, preferred | 90 | |
| Lowell | 181 | |
| Lumberton | 251 | |
| Marion Mfg. Co. | 100 | |
| Mooresville | 142 | 150 |
| Modena | 100 | |
| Nakomis | 200 | |
| Patterson | 125 | |
| Raleigh | 100 | 104 |
| Roanoke | 155 | |
| Williamson | 125 | |
| Wiscasset | 105 | |
| Woodlawn | 101 | |
| Olympia Mills, S. C., pf | | |
| Parker Cotton Mills, guaranteed | 100 | 100 & int |
| Parker, pfd. | 40 | 45 |
| Common | 16 | 20 |
| Orr Cotton Mills | 92 1/2 | |
| Ottarway Mills, S. C. | 100 | |
| Oconee Mills, common | 100 | |
| Oconee Mills, pfd. | 100 | & in. |
| Pacolet Mfg. Co., S. C. | 104 | 106 |
| Pacolet Mfg. Co., pfd. | 100 | & in. |
| Parker Mills, pfd. | 50 | 56 |
| Pelzer Mfg. Co., S. C. | 135 | |
| Pickens C. Mills, S. C. | 100 | |
| Piedmont Mfg. Co., S. C. | 144 | 160 |
| Poe F. W.) Mfg. Co., S. C. | 105 | 115 |
| Richland C. M., S. C., pf | | |
| Riverside Mills, S. C. | 25 | |
| Roanoke Mills, S. C. | 140 | 160 |
| Saxon Mill, S. C. | 126 | |
| Sibley Mfg. Co., Ga. | 64 | |
| Spartan Mill, S. C. | 110 | 112 |
| Tucapau Mill, S. C. | 280 | |
| Toxaway Mills, S. C. | 72 | |
| Union-Buffalo, 1st pfd. | 35 | 40 |
| Union-Buffalo Mills, S. C., 2nd pfd. | 10 | |
| Victor Mfg. Co., S. C. | | |
| Ware Shoals Mfg. Co., S. C. | 75 | |
| Warren Mfg. Co., S. C. | 90 | 85 |
| Warren Mfg. Co., pfd. | 100 | |
| Watts Mill, S. C. | 106 | |
| Williamston Mill, S. C. | 97 | |
| Woodruff C. Mills, S. C. | 95 | |
| Woodside C. Mills, S. C. | | |

Personal Items

Jas. S. Bradburry is now manager of the Prattville (Ala.) Cotton Mills.

Chas. P. Gregory has been promoted to loom fixer at the Southside Mills, Winston-Salem, N. C.

J. E. Caspar, of Albemarle, N. C., is supervising the erection of the new Lillian Knitting Mills at China Grove, N. C.

B. J. Dobbins, general superintendent of the Henrietta (N. C.) Cotton Mills has been confined to his home for several days by illness.

W. H. Epps has resigned as superintendent of the Prattville (Ala.) Cotton Mills, and is now located at Selma, Ala.

J. A. Hutchins has resigned as overseer of warping, dyeing, and cloth room at the Southside Mill, Winston-Salem, N. C.

Chas. L. Snider overseer of weaving at the Southside Mills, Winston-Salem, N. C., has been given charge of the dyeing and cloth room also.

N. W. Shaver has been promoted to second hand in weaving at the Southside Mills, Winston-Salem, N. C.

T. C. Green has been promoted to second hand in warping and dyeing at the Southside Mills, Winston-Salem, N. C.

C. L. Uchurch has resigned as carder and spinner at the Harriett Mills, Henderson, N. C., to become overseer of spinning at the Hamilton Carhart Mills, Rock Hill, S. C.

Will Be Tried For Killing Mill Overseer.

Curtis W. Spence will be tried again at Columbia, S. C., this week for killing Robt. L. O'Pry, a mill overseer in May, 1912. The last trial resulted in a mistrial.

Killed by Fright.

Mrs. Margaret Starnes, of the Lancaster (S. C.) Mill village, saw a buggy run over her eight-year-old grandson, Palmer Mehaffey, last Saturday, and she was so frightened that she fell over in a faint and died shortly afterwards.

Hospital For Duke.

A modern hospital is to be built at Duke, N. C., by the Erwin Cotton Mills Co. A part of the furniture and fixtures have been received and as soon as the remainder comes the hospital will be opened. Miss Elizabeth Pratt will be superintendent and Dr. W. P. Holt will be physician in charge.

Superintendent Runs Over Boy.

C. B. Gunn, superintendent of the Union Cotton Mills, LaFayette, Ga., while riding in his automobile last week ran over and injured a small boy. It is said that the accident

was entirely due to the carelessness of the boy, who jumped from a delivery wagon directly in front of Mr. Gunn's machine.

Revised Acreage Figures.

Revised figures compiled by the Department of Agriculture, show cotton acreage in United States last year under cultivation at the end of June, 34,766,000 acres, instead of 34,097,000 acres, the preliminary estimate made by the department in July.

A Youthful Criminal.

Frank Killian, a young white boy of the Oakland Mills, Newberry, S. C., is in jail awaiting trial for several cases on the charge of burglary. It seems that the boy, who is only 11 years old, has at different times entered several houses and made away with a quantity of jewelry and other valuables, and he also made an unsuccessful attempt to hold up a colored man. Most of the stolen property has been recovered.

the lad having been caught with the goods and unable to deny the charges. Altogether, the value of the stolen articles amounts to about \$300.

Isle of Palms Season.

The summer excursion movement to the Isle of Palms from points in South Carolina and Georgia will set in on Sunday, when the special rates become effective and visitors to the popular seashore resort will find a big day waiting them upon their arrival at the beach terminals. Since the Isle of Palms opened, fifteen years ago, between 200,000 and 300,000 excursionists have been entertained in the big amusement pavilion, consequently there is a wide familiarity with the attractions of the resort, but this summer's throng will be surprised at the new accommodations, due to the expenditure of many thousands of dollars in wisely planned improvements. For the special benefit of the out-of-town visitors, the boat and train schedules between Charleston and

the beach have been greatly amplified. A midnight trip is made on Saturday's to take care of passengers arriving on night trains.—Augusta (Ga.) Chronicle, May 29.)

Mill Park at West Durham.

Work has been pushed rapidly forward at the mill park at West Durham, N. C., in order to have the spot in condition by the opening of summer. Results are beginning to show and the results are pleasing to the mill management and the people of the hamlet. When completed the bit of ground will present an appearance that will rival similar recreation spots in larger cities.

It is the idea of the mill management to provide a place for their employees to get recreation, a place that they can look on as their own, built especially for them and kept in condition that they may enjoy themselves while they are not at work.

Corner Stone of Textile Institute.

The corner stone to the Textile Industrial Institute, Spartanburg, S. C., which will be laid on Saturday, June 7, with the Woodmen of the World in charge, was presented by the Southern Marble Works. It bears this inscription: "Textile Industrial Institute—Founded 1911—Built 1913."

At the laying of the corner stone Judge J. J. Burnett will be the orator. The local camp of Woodmen under Commander W. H. Broom will have charge of the exercises and will be assisted by delegations from all of the Woodmen camps of the county.

The Textile Institute will be a three-story structure, 135 feet long by 35 feet wide, built of solid granite with tile roofing. There are 22 acres of land to the premises and a landscape artist has mapped it out into splendid drives and parks and walks. The interurban is having a station erected near the institute which will be of great convenience to people visiting there, carrying them to and from the city in the five-cent limit.

Southern Girls and Cotton.

The crop from a thousand colleges and seminaries of "sweet girl graduates" during the next thirty days will probably be larger than ever it has been before but we greatly regret to say that the quantity of cotton goods that will be consumed in preparing it for commencement will not be proportional to its size.

In the South, or as the "sweet girl graduates" too often say, "the Southland," where cotton is raised and spun and woven, sentiments of patriotism should work against the skimpiness and scantiness of latter-day costuming.—Columbia (S. C.) State.

Our Spinning Rings SINGLE OR DOUBLE FLANGE
START EASIEST, RUN SMOOTHEST, WEAR LONGEST
Pawtucket Spinning Ring Co.
CENTRAL FALLS, R. I.

Dixie Spindle & Flyer Co., Inc.
REAR 14 E. 4th STREET, CHARLOTTE, N. C.
EXPERT OVERHAULERS AND REPAIRERS OF
SPINNING AND CARD-ROOM MACHINERY
REPAIRS MANUFACTURE AND FURNISH
Spindles Straightened and Re-pointed Steel Rolls Re-Necked and Re-Fluted
Card Room Spindles Re-Topped
Flyers Repaired and Balanced
Steel Rolls, Pressers, Spindles
Flyers, Bolsters, Bases
Top Rolls, Collars
Whorls, Steps, Etc
OUR EXPERTS ENDORSED BY OVER 500 MILL MEN

"MONARCH" Oak Belt

SOMETIMES a low priced belt is a GOOD BUY.
SOMETIMES the most COSTLY belt there is, is vastly the cheapest when measured by the COST PER HORSE POWER OF TRANSMISSION.
YOUR appreciation of what you get from us will depend on whether you are buying pounds of belting or UNITS OF FACTORY EFFICIENCY.
Send for Booklet.

THE BRADFORD BELTING CO.

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YORKSHIRE GUM

A SOLUBLE GUM to be used in Warp Sizing. It is especially valuable as a binder, as it combines readily with any starches and holds the Size well on the yarn. We recommend this Gum especially where wires are in use. Besides making a smooth, pliable warp, users of Yorkshire Gum will find the threads split readily, and "break backs" are eliminated. While giving the very best results, it is, at the same time, a most economical Size. It also prevents foaming in the box. Should use Raw Tallow or Soluble Tallow in addition. Write for formula.

ARABOL MANUFACTURING CO.

100 William Street, New York
CAMERON MacRAE Southern Sales Agent CHARLOTTE, N. C.

Want Department

Want Advertisements.

If you are needing men for any position or have second hand machinery, etc., to sell, the want columns of the **Southern Textile Bulletin** afford a good medium for advertising the fact.

Advertisements placed with us reach all the mills.

Employment Bureau.

The Employment Bureau is a feature of the **Southern Textile Bulletin** and we have better facilities for placing men in Southern mills than any other journal.

The cost of joining our employment bureau is only \$1.00 and there is no other cost unless a position is secured, in which case a reasonable fee is charged.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern textile industry.

Help Wanted.

Wanted: At once complete set of help to start our new Mill Number 2. Includes hands for card room, spinning room and weave room. Cast your lot with us if you are looking for health, wealth and happiness. Apply promptly to W. C. Cobb, Supt., Ware Shoals Mfg. Company, Ware Shoals, S. C.

Wanted

One card grinder and spinning and spooling help. Advantages and wages good.

H. L. Holden,
Rocky Mount Mills,
Rocky Mount, N. C.

Winder Wanted.

Want second hand Universal winding machine. Style No. 90. Address Winding, care Southern Textile Bulletin.

Spinning Help Wanted.

Want three or four families of spinning room help. Spinners make 15c per side, doffers 70c to 75c per day. All white work. No 18s. Healthy location and fair treatment. Apply to

W. B. Holt, Supt.,
Columbia Cotton Mills Co.
Columbia, Tenn.

WANT position as overseer of spinning. Experienced on both coarse and fine numbers and can handle large room. Good experience and fine references. Address No. 360.

For Sale.

One of the best equipped Yarn and Cordage Mills in the South. Machinery, stone building, tenant houses, all modern and the best; 1296 spindles, rope attachment, etc. Run only 4 years. Plenty of good labor. Located in prosperous town. Churches, school and good health. Cost \$53,000.00 and can be bought for \$18,000.00 to a quick buyer. Machinery cost considerably more than price asked. Address

Panola Cordage Co.,
M. E. Jarratt, Batesville, Miss.

Employment Bureau Active.

During the month of May thirty-three men joined our Employment Bureau, which is a reater number than ever joined before in any one month. During the past week we located five men, one as superintendent, one as overseer of carding, two as overseer of spinning and one as second hand in carding. We have probably located two others but have not heard from them yet.

Our employment Bureau advertisements are numbered in regular order and each is taken out after running for three months.

On June 1st, 1912, the highest was No. 189 and it will be noticed that on June 1st, 1913 the highest has reached No. 433 showing that during the past twelve months there have been 254 members of our bureau. We do not guarantee to secure a position for anyone, but we pay special attention to our employment bureau and we do secure positions for a great many men. The cost of joining our employment bureau for 3 months is \$1.00.

WANT position as superintendent. Now employed, and can give present employers as reference. Long experience both as overseer and as superintendent. Address No. 359.

WANT position as carder in large mill at not less than \$3.50. Have run present job 18 months and can give present employers as reference. Can change on short notice. Address No. 361.

WANT position as overseer of carding. Long experience and am now employed, but have good reasons for wishing to change. Good references. Address No. 362.

WANT position as master mechanic. Now employed but for good reasons prefer to change. Good references from present employer. Address No. 363.

WANT position as master mechanic. Am expert machinist and have mechanic. Can furnish satisfac-

QUALITY vs. PRICE In Picker Sticks

The IVEY BRAND Sticks Save Money in their durability—Save the Time of the Loom Fixer—Save the Stopping of the Loom to put in another—Save Making Flaws in the Cloth by Breakage. Every Stick Selected and Branded. Write us for prices.

IVEY'S WOODEN LUG STRAP—CHEAPER AND BETTER

IVEY MFG. CO., - Hickory, N. C.

had long experience as master tory references. Address No. 364.

WANT position as overseer of weaving at not less than \$3.00. Am now running a room and giving good satisfaction. Experienced on Draper looms. Good references. Address No. 365.

WANT position as engineer and machinist. 15 years experience in cotton mill steam plants and shops. Can furnish good references. Now employed and giving satisfaction but wish to change. Address No. 366.

WANT position as master mechanic at not less than \$3.00. Now employed and have long experience. Good references. Address No. 367.

WANT position as overseer of weaving. Have had long experience on both white and colored goods in successful mills. Can furnish good references. Address No. 368.

WANT position as superintendent. 12 years experience as overseer of weaving and assistant superintendent. Capable and qualified to run successfully. Can furnish excellent references. Address No. 369.

WANT position as superintendent. Fully competent and well recommended by present and past employers. Married. Age 40. Temperate habits. Experience extends over 20 years. Address No. 370.

WANT position as overseer of weaving. 23 years experience. Have run large rooms in S. C. Age 45. Good references. Prefer room with Draper looms. Address No. 371.

WANT position as engineer and master mechanic. 23 years experience. Strictly sober. Good references from present and past employers. Have family of spinners and doffers. Have seldom changed positions. Address No. 372.

WANT position as overseer carding. I am 38 years old, married strictly sober, and good manager of help. Hustler after quantity and quality, and keep eye on the cost. Can give references. Address No. 373.

WANT position as overseer weaving. Now employed as second hand on fine fancy cotton goods. Extra on Draper looms. Can give good references from past and present employers. Address No. 374.

PATENTS

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Send your business direct to Washington. Saves time and insure better service.

Personal Attention Guaranteed
30 Years Active Service

SIGGERS & SIGGERS

Patent Lawyers

Suite 34 N. U. Bldg. Washington, D. C.

WANT position as carder at not less than \$2.50 per day. Now employed but want larger job. 8 years experience as 2nd hand and overseer. Good references. Address No. 375.

WANT position as overseer of carding in 5,000 or 10,000 spindle mill. Would accept second in large mill. Now employed, and can furnish good references. Address No. 376.

WANT position as superintendent of a small mill or carder in a large mill. Am now overseer of one of the largest card rooms in the South. Can give A1 references. Married. Have held present job for six years. Address No. 377.

WANT position as overseer of spinning. Have had long experience on both coarse and fine numbers and can furnish good references. Can come on short notice. Address No. 378.

WANT position as superintendent. Have been employed as carder in some of the largest mills in the South and given satisfaction, but wish position as superintendent. Now employed. Good references. Address No. 379.

WANT position as superintendent or superintendent and manager of either yarn or cloth mill. Am experienced on hosiery yarns. Competent and reliable. Can invest some capital in good proposition. Address No. 380.

WANT position as overseer of weaving. Prefer Draper, Stafford or plain looms. Experienced on duck, drills, chambrays, dobby weavers, etc. First class references. Sober and reliable. Now employed. Address No. 381.

WANT position as overseer spinning or twisting or both. Have had long experience. Strictly sober and good manager of help. Can change on a week's notice. Address No. 382.

(Continued on next page)

(Continued from last page)

- WANT position as superintendent of yarn mill, denn warping and reeling, or overseer of spinning, carding or twisting in large mill. Now employed. Can change on 10 days' notice. Address No. 383.
- WANT position as carder or spinner or both. Now employed as carder and spinner in 10,000 spindle mill. The middle or Southern States preferred but will go anywhere. Can furnish good references. Address No. 384.
- WANT position as overseer carding at not less than \$3 per day. Can give good references and can change on six days' notice. Address No. 385.
- WANT position as overseer of weaving. Have had long experience and am now employed but prefer healthier location. Can furnish satisfactory references. Address No. 386.
- WANT position as overseer of spinning. Have had long experience and am now employed, but wish large mill. Can furnish good references. Address No. 387.
- WANT position as carder in large mill or superintendent of small mill on hosiery yarns. Now employed and giving satisfaction but wish to change. Good references. Address No. 388.
- WANT position as overseer of spinning. Now employed. 10 years experience. 40 years old. Married. Good reason for wishing to change. Good references. Address No. 389.
- experience on yarns from 5's to 80's. Strictly sober. Good manager of help. Best of references furnish satisfactory references. Address No. 390.
- WANT position as superintendent. Now employed but wish to change. Have had good experience on both white and colored goods and can furnish satisfactory references. Address No. 391.
- WANT position as overseer of spinning. Age 27. Have eight years' experience. Address No. 392.
- WANT position as overseer of weaving. 14 years experience on check and plain work on Crompton & Knowles and Draper looms. Have only changed once in ten years. Now employed. Address No. 393.
- WANT position as overseer of carding in small mill or second hand in large mill. Now employed but prefer to change. Can furnish good references. Address No. 394.
- WANT position as overseer of weaving. 22 years experience in weaving and slashing. Have a good job but don't like location. Prefer Draper room. Good references. Address No. 395.
- WANT position as overseer of weaving. Now employed but wish to change on account of unhealthy location. Good references. No. 396.
- WANT position as master mechanic. Have had long experience with cotton mill steam and electric power plants. Good references. Address No. 397.
- WANT position as chief engineer or master mechanic. Have had long experience in cotton mill work and can give satisfaction. Strictly sober. Have fine references. Address No. 398.
- WANT position as overseer of carding. Would accept position of second hand in large room. Have had good experience in first class mill and can furnish good references. Address No. 399.
- WANT position as carder and spinner. Now employed, but prefer to change. Have long experience and can furnish best of references. Address No. 400.
- WANT position as overseer of weaving. Now employed, but want larger job. Have had experience on many lines of goods and can give satisfaction. Good references. Address No. 401.
- WANT position as overseer of spinning or second hand in large mill. Experienced both as second hand and overseer on from 4's to 50's yarns. Age 28. References furnished if desired. Address No. 402.
- WANT position as master mechanic. Now employed. Have had 20 years experience and can furnish best of references. Address No. 403.
- WANT position as superintendent. Long experience and now employed, but wish to change. Good references both as to ability and character. Address No. 404.
- WANT position as superintendent of either spinning or weaving mill. Have had long experience and can assure best results as to production, quality, cost, etc. Address No. 405.
- WANT position as overseer of carding at not less than \$3.00 per day. Now employed as overseer of carding but wish to change for larger room. Good references. Address No. 406.
- WANT position of superintendent of small mill or overseer of spinning in large mill. Now employed as spinner and assistant superintendent and giving satisfaction. Good references. Address No. 407.
- WANT position as overseer of spinning. Now employed and giving satisfaction, but want larger job. Can furnish satisfactory references. Address No. 408.
- WANT position as carder and spinner on night or day run. Have filled one position as carder and spinner five years. Can furnish good references and get quality and quantity. Address No. 409.
- WANT position as overseer of weaving. Prefer print goods in N. C. Now employed, but have good reasons for wishing to change. Good references. Address No. 410.
- WANT position as overseer of spinning. Age 42. Married. Strictly sober. Have long experience on both coarse and fine, white and colored work. Address No. 411.
- WANT position as overseer of carding and spinning. Age 31. Married. Now employed in successful mill. Can furnish satisfactory references. Address No. 412.
- AN EASTERN MAN experienced on fine yarns and goods wants position as superintendent of Southern mill and can furnish fine references. Address No. 413.
- WANT position as superintendent. Have had 18 years experience. Several years in weaving, spinning and wide experience in dressing and slashing. Good manager of help and up-to-date on watching cost. Sober and good references. Address No. 414.
- WANT position as superintendent or overseer of large weave room in Ga., N. C. or S. C. Now employed as superintendent and have had long experience as overseer of weaving. Good references. Address No. 415.
- WANT position as superintendent of medium size mill or carder and spinner in large mill. Am now carder and spinner in 10,000 spindle mill, but want better position. Practical experience and also technical knowledge. Address No. 416.
- WANT position as superintendent. Now employed by good mill but would change for larger mill. Experienced on colored as well as gray goods. Satisfactory references. Address No. 417.
- WANT position as overseer cloth room in large mill by married man of experienced and ability. Am at present employed as overseer cloth room in one of the largest mills in the South and giving satisfaction. Can give references. Good reasons for desiring a change. Can change in two weeks. Address No. 418.
- WANT position as overseer of carding. 16 years in card room. 4 years as overseer. Married. Age 33. Good references. Address No. 419.
- WANT position as overseer of spinning. 11 years experience as overseer on from 20's to 100's. Also experience on twisting and winding. Good references. Address No. 420.
- WANT position as overseer of spinning and winding. 17 years experience in spinning and am now employed as overseer. Can furnish good references. Address No. 421.
- WANT position as overseer of spinning. Have had long experience in first class mills and can furnish satisfactory references as to ability and character. Address No. 422.
- WANT position as superintendent. Have long experience, both as overseer of spinning and as superintendent. Can furnish reference from previous employers. Prefer weaving mill. Address No. 423.
- WANT position as overseer of cloth room or as overseer of weaving. Experienced in both rooms with special reference to colored and fancy goods. Now employed. Address No. 424.
- WANT position as overseer of carding. 24 years experience in carding. Married. Sober. Good recommendations. Can change on short notice. Address No. 425.
- WANT position as carder and spinner. Have had long experience and can furnish satisfactory references. Also experienced in overhauling. Address No. 426.
- WANT position as overseer of spinning. Have long experience in good mills on both coarse and fine yarns. Can furnish satisfactory references. Address No. 429.
- WANT position as overseer of spinning. 10 years experience. 6 years as overseer on carded and combed yarns, also hosiery and warp yarns. Married. Age 31. Strictly sober. Now employed. Can change on short notice. Address No. 427.
- WANT position as carder. 24 years in card room. Now overseer. Age 38. Good manager of help. Married. Strictly sober. Can change on short notice. Good references. Address No. 428.
- WANT position as superintendent. Have had experience running both small and large mills and can furnish fine references, both as to ability and character. Address No. 430.
- WANT position as overseer of weaving, at not less than \$3.00 per day. Married. Of good character and temperate. Experienced on plain and check work. Have held present position two years. Can furnish references. Address No. 431.
- WANT position as superintendent. Have had long experience both as carder and superintendent and can furnish splendid references. Have special reputation as expert carder. Address No. 432.

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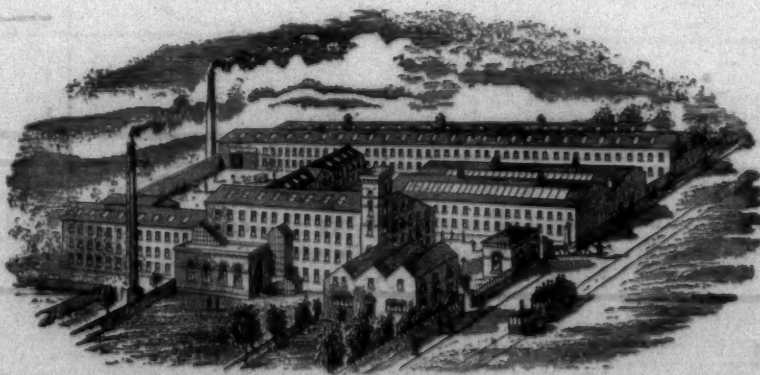
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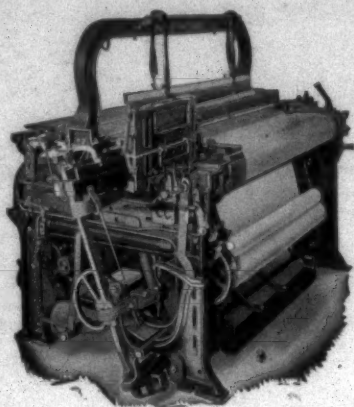
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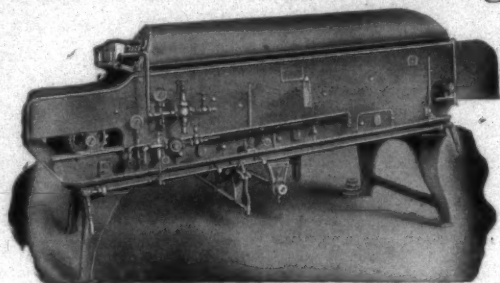
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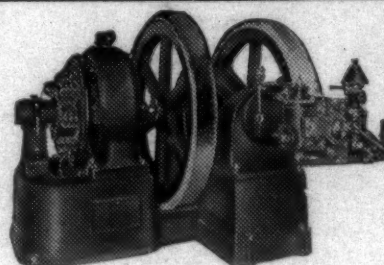
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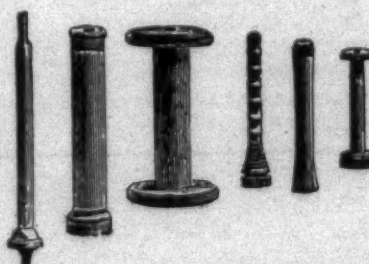
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